

GE
Security

SymDec 16 plus 4 User Manual



GE imagination at work

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Intended use Use this product only for the purpose it was designed for; refer to the data sheet and user documentation. For the latest product information, contact your local supplier or visit us online at www.gesecurity.eu.

FCC compliance This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

PENDING

You are cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



The European directive 2002/96/EC "Waste Electrical and Electronic Equipment" (WEEE) aims to minimize the impact of electrical and electronic equipment waste on the environment and human health. To conform with this directive, electrical equipment marked with this symbol must not be disposed of in European public disposal systems. European users of electrical equipment must now return end-of-life equipment for disposal. Further information can be found on the following website: www.recyclethis.info.

Regulatory



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Chapter 1 Introduction

This chapter provides an overview of your SymDec 16 plus 4, including the box contents, the installation environment requirements and associated equipment you right require before you begin installing, configuring, and using your SymDec 16 plus 4.

In this chapter:

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Introduction

This is the GE *SymDec 16 plus 4 User Manual* for models:

- SymDec16 plus 4-320
- SymDec16 plus 4-640
- SymDec16 plus 4-1.28T
- SymDec16 plus 4-2T
- SymDec16 plus 4-3T

This document includes an overview of the product and detailed instructions explaining how to install and configure the SymDec 16 plus 4.

There is also information describing how to contact technical support if you have questions or concerns.

To use this document effectively, you should have the following minimum qualifications:

- a basic knowledge of CCTV systems and components; and
- a basic knowledge of electrical wiring and low-voltage electrical connections.

Read these instructions and all ancillary documentation entirely before installing or operating this product.

Note: A qualified service person, complying with all applicable codes, should perform all required hardware installation.

Conventions used in this document

The following conventions are used in this document:

Bold	Menu items and buttons.
<i>Italic</i>	Emphasis of an instruction or point; special terms.
	File names, path names, windows, panes, tabs, fields, variables, and other GUI elements.
	Titles of books and various documents.
Monospace	Text that displays on the computer screen.
	Programming or coding sequences.
<i>Blue italic</i>	Hyperlinks to cross-references, related topics, and URL addresses.

Safety terms and symbols

These terms may appear in this manual:



CAUTION

Cautions identify conditions or practices that may result in damage to the equipment or other property.



Warnings identify conditions or practices that could result in equipment damage or serious personal injury.

Product overview

The SymDec 16 plus 4 is a 16-channel Digital Video Recorder that uses “hybrid” recording that works with both conventional analog cameras (16) and the new family of GE IP products. This unique platform provides a graceful migration path to digital recording – the future of video recording.

The SymDec 16 plus 4 allows users to record full-size images at full speed on every channel. Using MPEG-4 compression, the SymDec 16 plus 4 records at 30, 15, 10, 5, and 2 frames per second (NTSC) and has virtual triplex functionality for simultaneous viewing, playback, and recording of video.

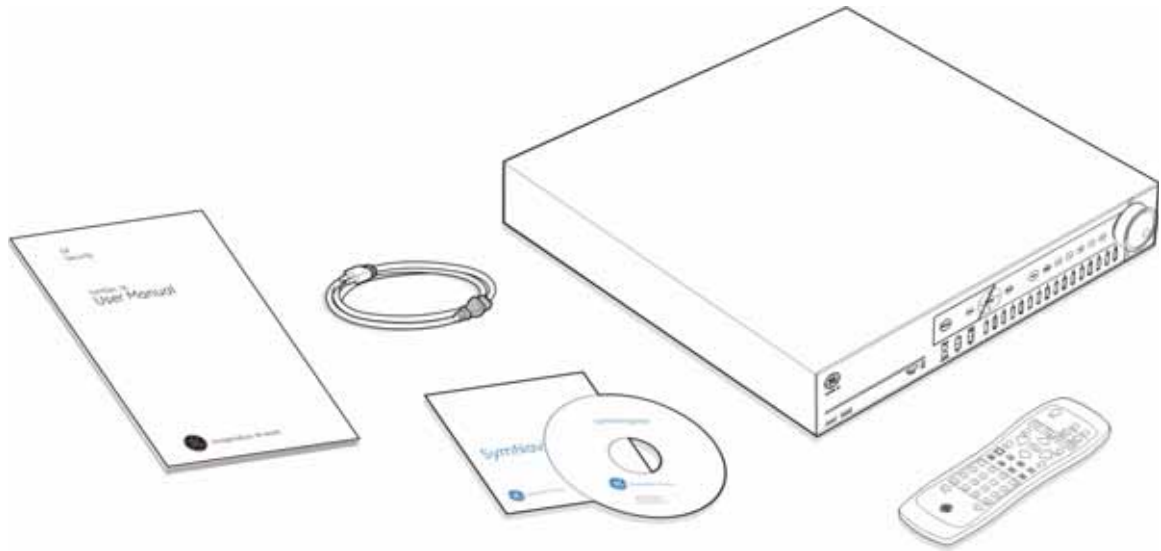
Note: In PAL video mode the SymDec 16 plus 4 can record at 25, 12.5, 8.3, 5, and 2.1 fps.

The SymDec 16 plus 4 has a form factor that’s one rack unit wide by 2U high, so it fits easily into a standard 19-inch rack. All models of the SymDec 16 plus 4 are equipped with a built-in DVD recorder, which allows for portable storage or evidence transfer. In addition, the SymDec 16 plus 4 can be easily networked and recorded video viewed remotely over Ethernet.

Features

- View live and recorded video from multiple SymDec 16 plus 4’s using SymNav software
- Advanced MPEG4 video compression
- 16-channel composite video input/output connection
- 9 video quality settings
- Triplex functionality
- Auto-detect video mode (NTSC or PAL) on startup
- VGA, DVI, and composite video outputs
- Records up to 30 frames per second (NTSC) of real time video
- Records up to 25 frames per second (PAL) of real time video
- Multi-level password protection
- Continuous recording in disk overwrite mode
- A simple on-screen display (OSD) menu system
- Remote configuration over TCP/IP
- Clock synchronization with network server
- Timed recording
- Dynamic IP addressing (DHCP)
- Support for Dynamic Domain Name Server (DDNS)
- Local search on time, date, and hardwired alarms
- Alarm handling with history log
- Unique at-a-glance alarm indicators
- Alarm notification through email
- Motion detection support
- Programmable Auto Delete Mode (ADM)
- Hard disk monitoring features
- Video streaming with UDP (User Datagram Protocol) and TCP (Transmission Control Protocol) support

Figure 1. SymDec 16 plus 4 contents unboxed



Product contents

The SymDec 16 plus 4 system consists of the following:

- The SymDec 16 plus 4 unit
- 3 power cords (US, British, and EU)
- SymDec 16 plus 4 user manual
- SymNav software CD
- 6 terminating connectors (attached to back panel)
- IR remote controller

Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If you need to return the unit, you must ship it in the original box.

Installation Environment

Power: Ensure that the site's AC power is stable and within the rated voltage of the external power supply. If the site's AC power is likely to have spikes or power dips, use power line conditioning or an Uninterruptable Power Supply (UPS).

Ventilation: Install the unit in a well-ventilated area. Take note of the locations of the cooling vents in the unit's enclosure, and ensure that they are not obstructed.

Temperature: Observe the unit's ambient temperature specifications when choosing a location space. Extremes of heat or cold beyond the specified operating temperature limits may cause the unit to fail. Do not install the unit on top of other hot equipment.

Moisture: Do not expose the unit to rain or moisture. Moisture can damage the internal components. Do not install this unit near sources of water.

Hard drives: Hard drives can be damaged if not handled properly. Do not set heavy objects on top of this unit. Take all necessary precautions to protect this unit from transient voltages and do not place this unit near magnetic devices. Do not move this unit while in operation. Wait at least 30 seconds after removing power before moving the unit or removing the hard drive.

Associated Equipment

Associated equipment you might need:

- Analog cameras (16).
- SymVeo IP Cameras (4).
- Analog or DVI monitor to view VGA video.
- Alarm input devices: Pressure sensors, motion detectors, etc.
- Alarm output devices: Buzzers, Sirens, Flashing Lights, etc.
- A PC connected by Ethernet.
- Microphones (4) with amplification.
- Speakers to hear audio.
- Symnet encoder/decoder to receive or send video.

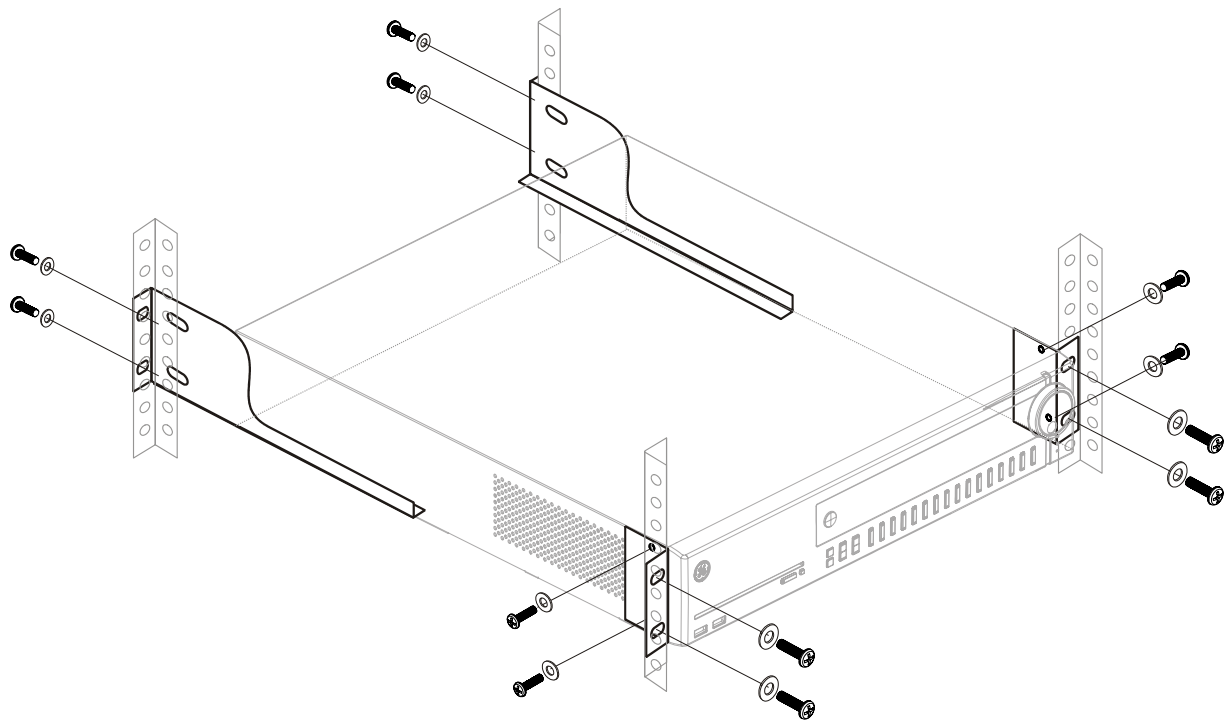
For instructions regarding the connection of the associated security equipment in your system, please consult the instruction manual of the associated equipment.

Rack Mounting

The SymDec 16 plus 4 is easily rack-mountable with the purchase of the model number **SymDec16 plus 4-RK** rack mount kit. To install, do the following:

1. Attach the 2 small rack ears as shown with the supplied hardware.
2. Attach the 2 large rear support brackets to the rear rails.
3. Attach the Symdec 16 plus 4 to the front rails.

Figure 2. Rack mount installation



CAUTION

Do not rackmount the SymDec16 plus 4 without the rear rails installed. Failure to install the rear rails can damage the SymDec 16 plus 4.

Passwords

Passwords are provided to limit access to the SymDec 16 plus 4, WebServer, and the SymNav software. It is recommended that the default passwords be changed after installation is complete. As a security measure, store the passwords in the administrator's secured files or in a limited access area.

Table 1. Default passwords

Password name	Program	Changeable by user	Default password
Log In Password user 1	On Screen Display (OSD)	Yes, through the Main menu	111111
Log In Password user 2	On Screen Display (OSD)	Yes, through the Main menu	222222
Log In Password user 3	On Screen Display (OSD)	Yes, through the Main menu	333333

Default IP Addresses

These settings provide access and control of the SymDec 16 plus 4 over an IP network.

Table 2. Default IP addresses

Address name	Changeable by user	Default user
IP Address	Yes	192.168.1.82
Subnet Mask	Yes	255.255.255.0
Gateway Address	Yes	192.168.1.1

These IP addresses should be changed before you connect to your IP network. Contact your network administrator to obtain your network specific addresses.

Chapter 2 Connections and Controls

This chapter deals with the various physical features, connectors, controls, and indicators of the SymDec 16 plus 4.

In this chapter:

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Front Panel Controls and Features

Figure 3. SymDec 16 plus 4 front panel

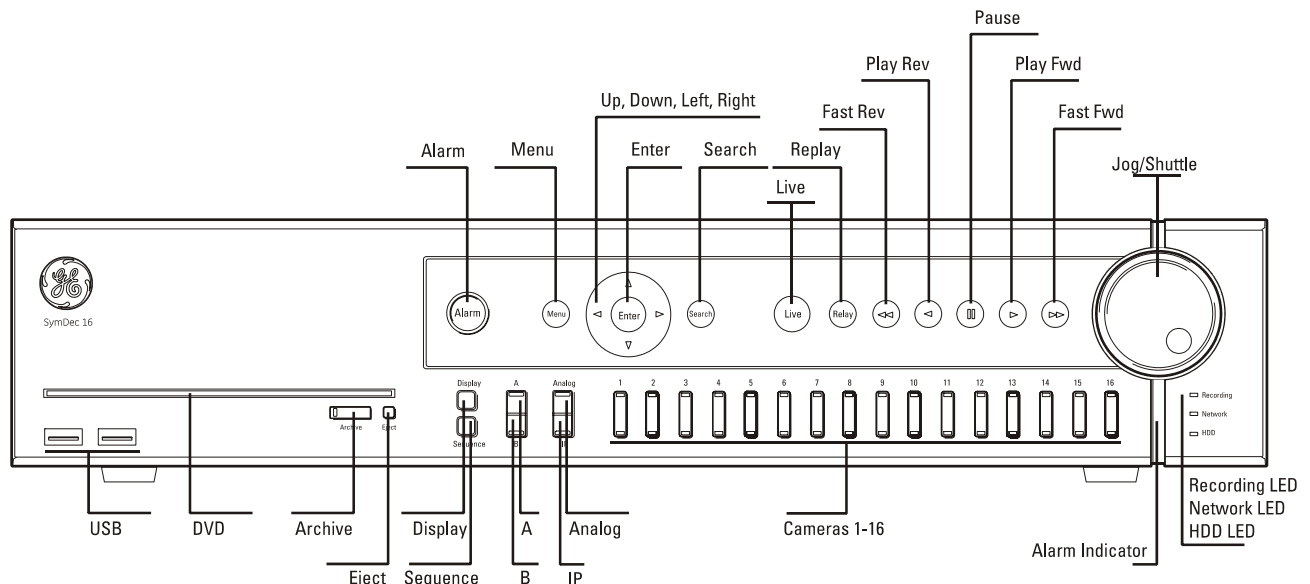


Table 3. Front panel controls

Control	Use
Alarm button	LED glows red to indicate an alarm condition. Push to silence current alarm.
Menu menu	Touch to enter OSD and enter <i>Setup mode</i> . In <i>Setup mode</i> , touch to discard changes and return to the next highest level menu or exits OSD.
Arrow buttons	Use to navigate menus.
Enter button	In <i>Setup mode</i> toggles in and out of editable fields. In <i>Playback mode</i> starts <i>Cameo mode</i> .
Search button	Touch to display the <i>Search</i> and <i>Disk Analysis</i> screen.
Live button	Touch to stop all video playback and return to showing live video.
Replay button	Touch to jump the play marker back x seconds. Configured in Front Panel on page 50.
Fast reverse button	Touch to play video in reverse. Touch again to increase speed.
Play reverse button	Touch to play video in reverse at 1X speed.
Pause button	Touch to freeze all video at the current play marker.
Play forward button	Touch to play video at 1X speed.
Fast forward button	Touch to play video. Touch again to increase speed.
Jog/Shuttle	During playback, rotate the shuttle (the outer dial) to increase playing speed. Use the jog to pause and view video frame by frame.

Control	Use
Alarm Indicator	Mimics the most severe status level of the alarm LED's (Camera, Recording, Network, or HDD LED) Red (flash bright). If any alarm LED is flashing red, or Red (solid bright). If any alarm LED is solid red, or Green (solid bright). If all status is okay on all alarm LED's. Off. Power off.
USB connectors	Connects to compatible USB devices such as a flashdrive.
DVD recorder	Use to archive video. See caution below.
Archive button	Push to initiate <i>Archive mode</i> .
Eject button	Push to eject DVD-R from drive.
Display button	Push to cycle through available multiscreen options for monitor A.
Sequence button	Push to start <i>Sequence mode</i> . Default sequence is analog cameras 1-16, then IP cameras 1-4.
Monitor A/B buttons	Controls which monitor will be affected by the analog/IP camera controls.
Analog/IP button	Controls which camera is selected when the camera buttons are pressed.
Camera buttons	Push to display the selected camera in fullscreen. In <i>Setup mode</i> used to input numerical data.
Camera LED (Analog 1-16 and IP 1-4)	Green (solid bright): Connected and working properly, awake mode. Green (solid dim): Connected and working properly, stealth mode. Red (flashing): Alarm detected, not acknowledged, or in Videoloss. Red (solid): Alarm detected, acknowledged. Off, camera is disabled.
Recording LED	Green (solid bright): Recording properly, awake mode. Green (solid dim): Recording properly, stealth mode. Red (flashing): Recording failure, not acknowledged. Red (solid): Recording failure, acknowledged.
Network LED	Green (solid bright): Connected and working properly, awake mode. Green (solid dim): Connected and working properly, stealth mode. Red (flashing): Connection failure alarm, not acknowledged. Red (solid): Connection failure alarm, acknowledged.
HDD LED	Green (solid bright): Working properly, awake mode. Green (solid dim): Working properly, stealth mode. Red (flashing): Disk failure alarm, not acknowledged. Red (solid): Disk failure alarm, acknowledged.

**CAUTION**

Do not use DVD's with paper labels attached to the surface of the DVD. The label's surface may become damaged and cause the DVD media to become stuck inside the DVD recorder.

Only pre-formatted DVD+RW media can be used for archiving. In order to use the DVD drive for archiving video, the DVD media must be DVD+RW. The DVD+RW must be pre-formatted to UDF format using an application such as Nero InCD. Only then will the DVD+RW be recognized by the SymDec16 plus 4.

Back Panel Connections

Figure 4. SymDec 16 plus 4 back panel

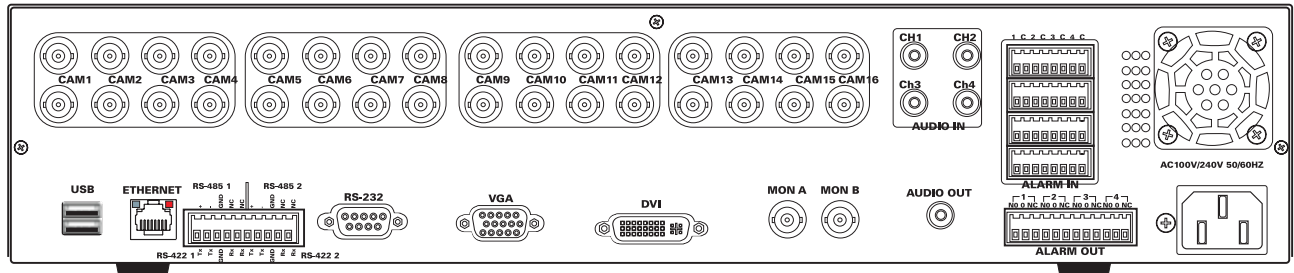


Table 4. Back panel connectors

Connector	Use
Video In/Out	Camera Inputs 1-16, BNC connector, looping, and auto-terminating.
Audio inputs	4 channels of line-level audio inputs with RCA connectors.
Alarm inputs	16 channels of alarm inputs.
USB connectors	2 USB connectors for flashdrives or a USB compatible mouse.
Ethernet port	For connecting to a Network.
Serial inputs (RS-485/RS-422)	2 RS-422 or 2 RS-485 serial ports.
RS-232 connector	1 RS-232 serial port.
VGA connector	For connecting to a standard VGA monitor.
DVI connector	For connecting to a Digital Video Interface monitor.
Monitor A/B	Composite video output for monitors A and B.
Audio out	Line-level audio output with a RCA connector.
Alarm out connector	4-channel alarm outputs.
Power connector	For connecting the power cord.

Camera Inputs

There are two BNC jacks for each camera. Either jack can receive a camera signal. The signal is looped (directly connected to the other jack), making the camera signal available to other equipment.

The camera input connectors are auto terminating. This means that the input signal will automatically be terminated with 75-Ohms unless a 2nd cable is connected to the 2nd BNC connector of the same camera input. Make sure there is 75-Ohm termination at the end of the video line if the signal is looped through the SymDec 16 plus 4.

Time base correction is performed during digital capture. As a result, cameras do not require synchronization.

Cable	75-Ohm coaxial
Connectors	BNC
Auto terminating	Yes
Passive looping	Yes

Audio Inputs and Output

The unit is equipped with 4 audio inputs and 1 audio output. Both the audio output and the audio inputs are line-level. The 4 audio inputs are associated with the first 4 cameras.

Audio input	RCA jack, 315 mV, 40k Ohms. Unbalanced
Audio out	RCA jack, 315mV, 600 Ohms. Unbalanced

Note: Line-level audio requires amplification.

Alarm Inputs

Four 8-pin connectors on the back panel provide the connections for the alarm inputs. Connect the wires to the 4 terminating connectors provided with the SymDec 16 plus 4. See the table below for a description of the pinouts. These inputs are not configurable to operate as NC (normally closed) circuits.

Table 5.

Alarm IN connector							
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	Alarm Input 1 N/Open	5	Alarm Input 5 N/Open	9	Alarm Input 9 N/Open	13	Alarm Input 13 N/Open
C	Alarm Input 1 Common	C	Alarm Input 5 Common	C	Alarm Input 9 Common	C	Alarm Input 13 Common
2	Alarm Input 2 N/Open	6	Alarm Input 6 N/Open	10	Alarm Input 10 N/Open	14	Alarm Input 14 N/Open
C	Alarm Input 2 Common	C	Alarm Input 6 Common	C	Alarm Input 10 Common	C	Alarm Input 14 Common
3	Alarm Input 3 N/Open	7	Alarm Input 7 N/Open	11	Alarm Input 11 N/Open	15	Alarm Input 15 N/Open
C	Alarm Input 3 Common	C	Alarm Input 7 Common	C	Alarm Input 11 Common	C	Alarm Input 15 Common
4	Alarm Input 4 N/Open	8	Alarm Input 8 N/Open	12	Alarm Input 12 N/Open	16	Alarm Input 16 N/Open
C	Alarm Input 4 Common	C	Alarm Input 8 Common	C	Alarm Input 12 Common	C	Alarm Input 16 Common

Note: Do not attempt to wire any accessories directly to the I/O connector on the back panel. These connections require dry contact (voltage free) closure to activate.

USB connectors

Industry compatible USB connectors for use with flashdrives for updating the SymDec 16 plus 4.

Ethernet Port

The cable connection configuration for the ethernet port depends on your network configuration:

- For a SymDec 16 plus 4 that connects directly to a hub, use a straight through connection.
- For a SymDec 16 plus 4 that connects directly to a PC, use a cross-over connection.

Consult with your network administrator or IS professional for the specific type of configuration. See [The Network menu](#) on page 57 for information about configuring the Ethernet settings in the menu system

Ethernet	10/100/1000 Base-T, auto sensing
Wire type	Cat 5e/6
Connector type	RJ-45
Maximum cable length	328 feet/100 meters
Minimum cable length	6 feet/1.8 meters
Hub wiring configuration	Straight through
PC wiring configuration	Cross-over

RS-485/RS-422 I/O connectors

These (2) serial I/O ports can be configured as either RS-485 or RS-422 and are used for Pan, Tilt, Zoom control of PTZ cameras. Use [Serial Communications](#) on page 75 to configure these ports. See tables 6 and 7 for the serial pinouts for each configuration.

Table 6. RS-485 1 and 2 port pinouts

Port type	Pin	Description
RS-485 (1)	1	+
	2	-
	3	Ground
	4	Not connected
	5	Not connected
RS-485 (2)	6	+
	7	-
	8	Ground
	9	Not connected
	10	Not connected

Table 7. RS-422 1 and 2 port pinouts

Port type	Pin	Description
RS-422 (1)	1	TX+
	2	TX-
	3	Ground
	4	RX+
	5	RX-
RS-422 (2)	6	TX+
	7	TX-
	8	Ground
	9	RX+
	10	RX-

RS232 Port

The RS232 port is provided for use with GE's ProBridge text insertion interface modules in conjunction with compatible POS (point of sale) and ATM (automated teller machine) systems. Use [Serial Communications](#) on page 75 to configure this port.

Table 8. RS232 port pinouts

Pin	Description
1	DCD
2	RX
3	TX
4	DTR
5	Grounded
6	Not connected
7	RTS
8	CTS
9	Not connected

VGA connector

The 15-pin VGA connector is provided for connection to a standard VGA monitor for monitoring video.

DVI connector

The DVI (Digital Video Interface) is provided for connection to high-speed, high-resolution digital displays.

Monitor A/B composite output

When connecting directly from the SymDec 16 plus 4 to the monitor, select the 75-Ohm impedance setting on the monitor. If an additional device is connected to the monitor's looping output, set the termination of the additional device as 75-Ohm, and set the termination of the monitor as Hi-Z (High Impedance).

Cable	75-Ohm
Connectors	BNC

Alarm out connector

The 4 Alarm out connectors are provided for connections to audio/visual alarm notification devices such as sirens and warning lights.

Table 9. Alarm out port pinouts

Alarm out number	Pin	Description
Alarm out 1	1	NO (Normally open)
	2	O (Open)
	3	NC (Normally closed)
Alarm out 2	1	NO (Normally open)
	2	O (Open)
	3	NC (Normally closed)
Alarm out 3	1	NO (Normally open)
	2	O (Open)
	3	NC (Normally closed)
Alarm out 4	1	NO (Normally open)
	2	O (Open)
	3	NC (Normally closed)

Power Connector

Plug the power cord into the power cord connector and then into a properly rated wall socket. Once power is applied to the unit, it will begin its power-up procedure. The unit will begin by displaying the software version on Monitor-A, then the unit will begin recording automatically.

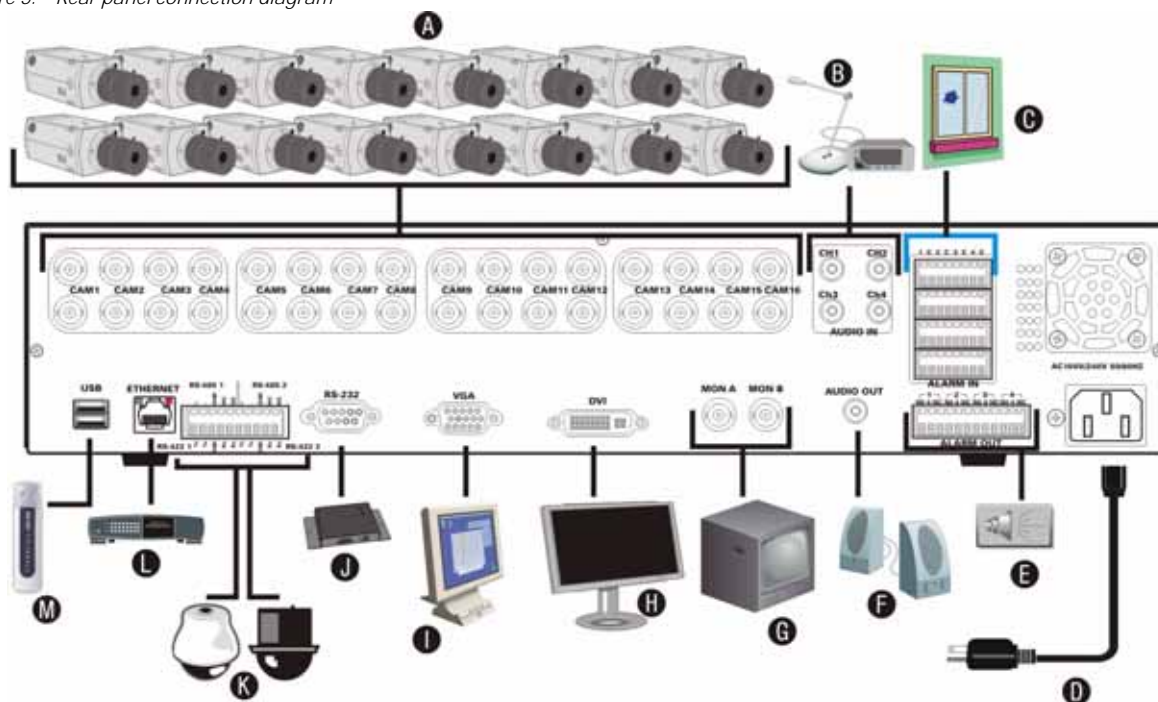
Table 10. Power supply rating

Power supply	
Voltage	100-240 VAC 50-60 Hz, auto-ranging
Amps	5

Connection Diagrams

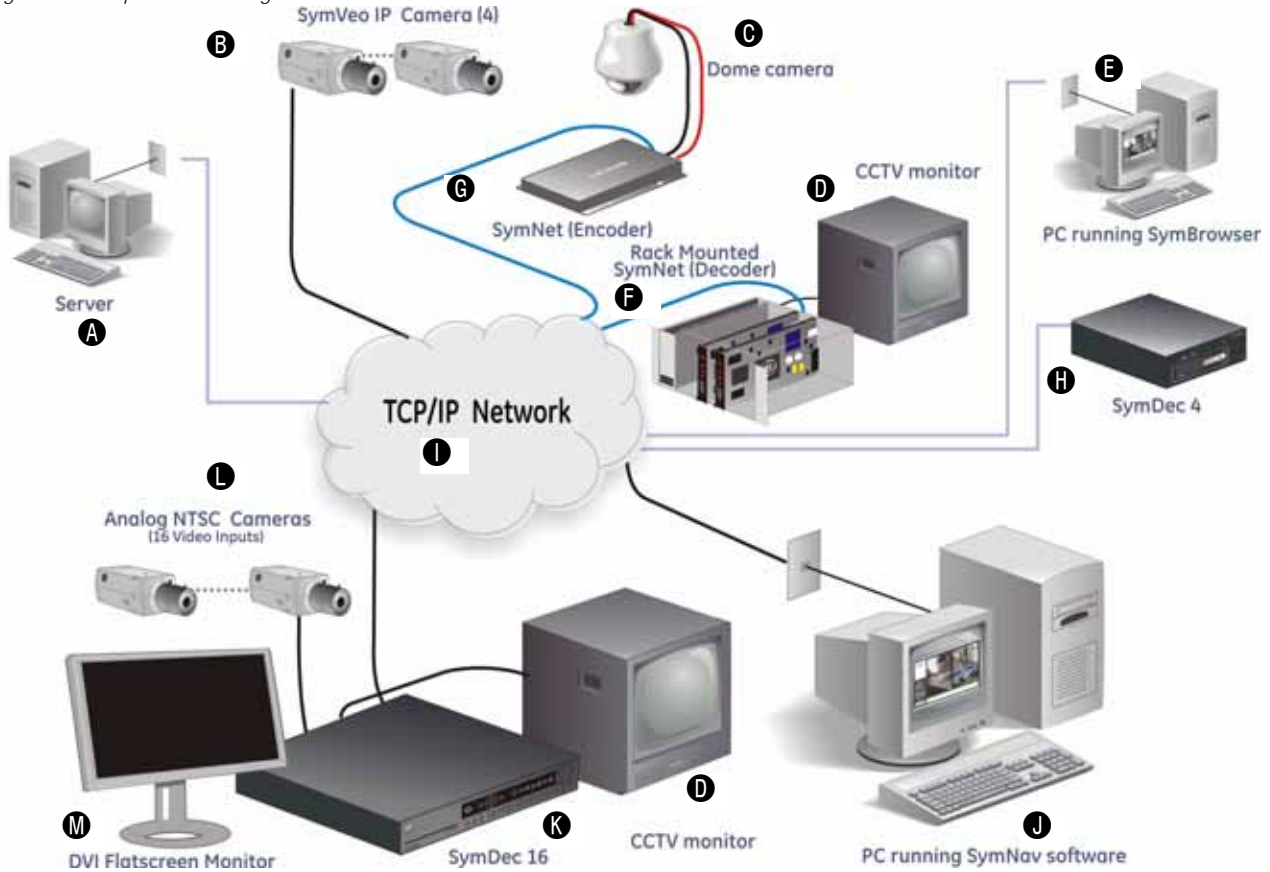
Use the figures on the following pages a visual guide to connect the various peripherals to the SymDec 16 plus 4.

Figure 5. Rear panel connection diagram



- | | |
|--------------------------------|--------------------------|
| A 16 cameras | H DVI flatscreen |
| B Audio line in (4) | I VGA |
| C Alarm inputs | J ProBridge |
| D Power cord | K PTZ |
| E Alarm out (4) | L Ethernet or LAN |
| F Lin eout | M USB FlashDrive |
| G CCTV monitors A and B | |

Figure 6. Sample network diagram

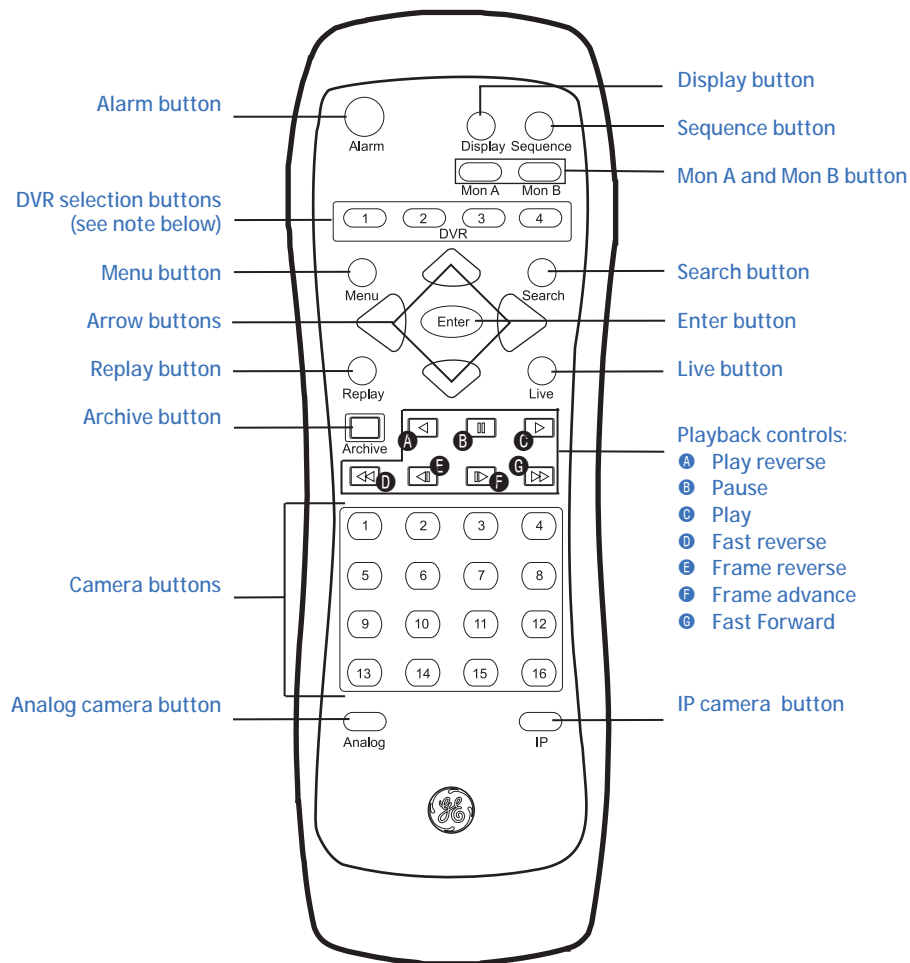


- | | |
|---|---|
| A Server | H SymDec 4 |
| B SymVeo IP camera (4) | I TCP/IP network |
| C Dome camera | J PC running SymNav software |
| D CCTV monitor CCTV monitor | K SymDec 16 |
| E PC running SymBrowser | L Analog NTSC/PAL cameras (16 video input) |
| F Rack mounted SymNet (Decoder) | M DVI flatscreen monitor |
| G SymNet (Encoder) | |

The Remote Controller

The SymDec 16 plus 4 is supplied with an Infra Red (IR) remote control unit. It can be used to operate many of the main functions of the SymDec 16 plus 4 and can be programmed to work with up to 4 SymDec 16 plus 4's.

Figure 7. The remote control unit



Note: The remote controller can be programmed with a unique address (1-4) so that the controller will only be able to communicate with unit's with that address. See [Front Panel](#) on page 50 to program.

Chapter 3 Basic Operations

This chapter provides procedures for performing some of the basic operations of the SymDec 16 plus 4 from logging in to creating an archive disk.

In this chapter:

<i>Front Panel Controls</i>	22
<i>Operations</i>	24
<i>How to Log In.</i>	24
<i>How to change the display for Monitor A and Monitor B</i>	24
<i>How to change the display to a full-screen analog view</i>	24
<i>How to change the display to a full-screen IP view</i>	24
<i>How to view multiscreen displays</i>	24
<i>How to change the display presets</i>	25
<i>How to enter Cameo mode</i>	25
<i>How to display Sequencing</i>	25
<i>How to return to the default sequence list</i>	25
<i>How to enter Playback mode</i>	25
<i>How to Search using Disk Analysis</i>	26
<i>How to Search using the Filters Screen</i>	26
<i>How to archive from the Search screen</i>	26
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Front Panel Controls

The front panel is shown here as quick reference for the procedures that follow.

Figure 8. SymDec 16 plus 4 front panel

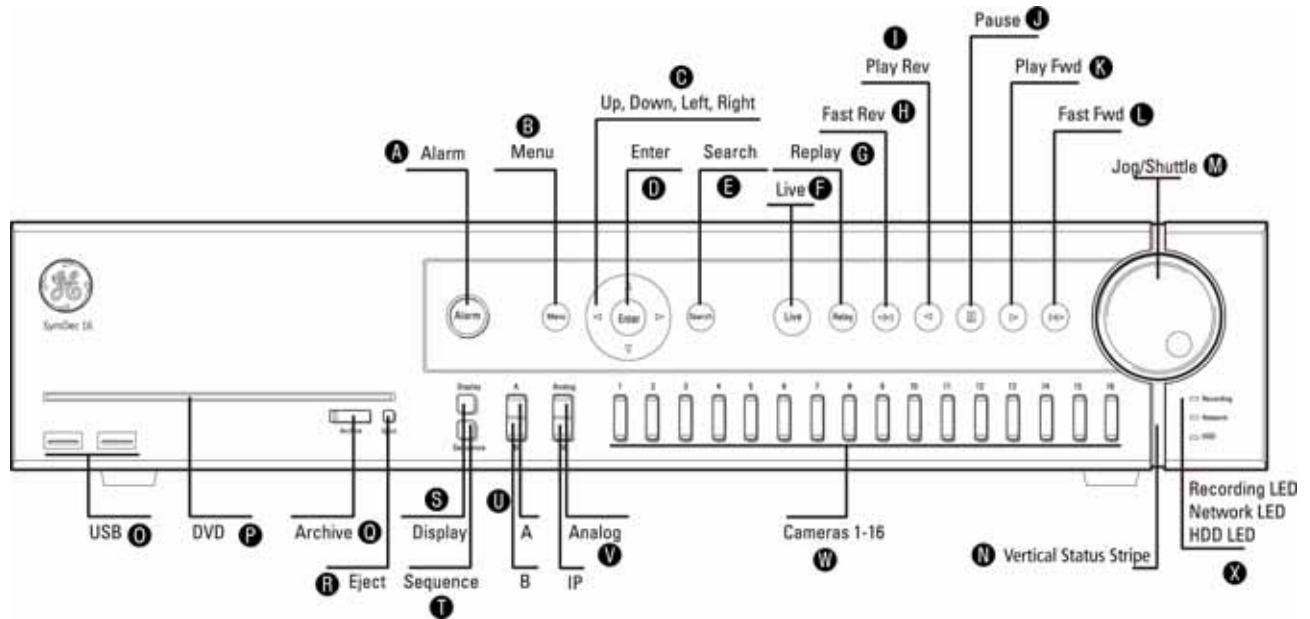


Table 11. Front panel controls

	Control	Use
A	Alarm button	LED glows red to indicate an alarm condition. Push to silence current alarm.
B	Menu menu	Touch to enter OSD and enter <i>Setup mode</i> . In <i>Setup mode</i> , touch to discard changes and return to the next highest level menu or exits OSD.
C	Arrow buttons	Use to navigate menus.
D	Enter button	In <i>Setup mode</i> toggles in and out of editable fields. In <i>Playback mode</i> starts <i>Cameo mode</i> .
E	Search button	Touch to display the <i>Search</i> and <i>Disk Analysis</i> screen.
F	Live button	Touch to stop all video playback and return to showing live video.
G	Replay button	Touch to jump the play marker back x seconds. Configured in Front Panel on page 50.
H	Fast reverse button	Touch to play video in reverse. Touch again to increase speed.
I	Play reverse button	Touch to play video in reverse at 1X speed.
J	Pause button	Touch to freeze all video at the current play marker.
K	Play forward button	Touch to play video at 1X speed.
L	Fast forward button	Touch to play video. Touch again to increase speed.

	Control	Use
M	Jog/Shuttle	During playback, rotate the shuttle (the outer dial) to increase playing speed. Use the jog to pause and view video frame by frame.
N	Vertical status stripe	Mimics the most severe status level of the alarm LED's (Camera, Recording, Network, or HDD LED) Red (flash bright). If any alarm LED is flashing red, or Red (solid bright). If any alarm LED is solid red, or Green (solid bright). If all status is okay on all alarm LED's. Off. Power off.
O	USB connectors	Connects to compatible USB devices such as a flashdrive.
P	DVD recorder	Use to archive video. See caution below.
Q	Archive button	Push to initiate <i>Archive mode</i> .
R	Eject button	Push to eject DVD-R from drive.
S	Display button	Push to cycle through available multiscreen options for monitor A.
T	Sequence button	Push to start <i>Sequence mode</i> . Default sequence is analog cameras 1-16, then IP cameras 1-4.
U	Monitor A/B buttons	Controls which monitor will be affected by the analog/IP camera controls.
V	Analog/IP button	Controls which camera is selected when the camera buttons are pressed.
W	Camera buttons	Push to display the selected camera in fullscreen. In <i>Setup mode</i> used to input numerical data.
X	Recording LED	Green (solid bright): Recording properly, awake mode. Green (solid dim): Recording properly, stealth mode. Red (flashing): Recording failure, not acknowledged. Red (solid): Recording failure, acknowledged.
	Network LED	Green (solid bright): Connected and working properly, awake mode. Green (solid dim): Connected and working properly, stealth mode. Red (flashing): Connection failure alarm, not acknowledged. Red (solid): Connection failure alarm, acknowledged.
	HDD LED	Green (solid bright): Working properly, awake mode. Green (solid dim): Working properly, stealth mode. Red (flashing): Disk failure alarm, not acknowledged. Red (solid): Disk failure alarm, acknowledged.



CAUTION

Do not use DVD's with paper labels attached to the surface of the DVD. The label's surface may become damaged and cause the DVD media to become stuck inside the DVD recorder.

Only pre-formatted DVD+RW media can be used for archiving. In order to use the DVD drive for archiving video, the DVD media must be DVD+RW. The DVD+RW must be pre-formatted to UDF format using an application such as Nero InCD. Only then will the DVD+RW be recognized by the SymDec 16 plus 4.

Operations

The following sections provide step-by-step instructions on some of the SymDec 16 plus 4's most common operations.

How to Log In

To log in to the Symdec 16 plus 4 do the following:

1. Press the *Menu* button on the front panel or remote control.
2. Use the *arrow* buttons to select your user account and press *Enter* to finish.
3. Input your PIN code, using the *camera number* buttons on the front panel or remote camera buttons. Select *Done* when finished.
4. You should now be logged in. Depending on your permissions, you can now access *Search*, *Archive*, the front panel controls and the OSD menus.

How to change the display for Monitor A and Monitor B

1. To control live and playback functions and access the menus, press the *Mon A* button.
2. To change the display of live video on the secondary display, press the *Mon B* button.

How to change the display to a full-screen analog view

1. Press the *Analog* button if the LED is not lit to enable the analog camera buttons.
2. Press the *camera number* (1-16) of the camera you wish to view full-screen.

How to change the display to a full-screen IP view

1. Press the *IP* button if the LED is not lit to enable the IP camera buttons.
2. Press the *camera number* (1-4) of the IP camera you wish to view full-screen.

How to view multiscreen displays

1. Select the display to view the multiscreens by pressing the *Mon A or B* button.
2. Press the *Display* button to toggle through the available multiscreen displays.
3. Display sequence for Mon A is full-screen, 4-up, 9-up, 16-up. Display sequence for Mon B is full-screen and 4-up.

How to change the display presets

1. Press and hold the *Display* button on the front panel.
2. The *Display Preset* screen will appear.
3. Select from the ten displayed options by pressing the corresponding camera button. The selected screen replaces the factory default display.

How to enter Cameo mode

A cameo is defined as any cell in a multiscreen display.

1. From any multiscreen display, use the arrow buttons to move the selection box to a selected display and press *enter*.
2. Press the *IP* or *Analog* button followed by a *camera number* button.

How to display Sequencing

The sequencing feature allows a camera to be displayed briefly on-screen, before advancing to the next camera in the sequence list. The default sequence list displays each camera in numerical order.

From Full Screen

1. Press any *camera number* to enter fullscreen mode.
2. Press the *Sequence* button to begin automatic sequencing.

From Multiscreen

1. While in a multiscreen display, use the *arrow* buttons to move the selection box to the camera you wish to display sequencing and press *enter*.
2. Press the *Sequence* button to begin automatic sequencing in that cameo.

How to return to the default sequence list

1. Press and hold the *Display* button to reset all screens to the default.
2. Select number nine to return to the default screen list.

How to enter Playback mode

From Multiscreen

1. In multiscreen mode, move the selection box to the desired camera and press *enter*.
2. Press *play*. The selected camera is now in playback.

To return to Live mode

1. With the selection box on the playback display cameo press *enter*.
2. Press the *Live* button. The selected display is now in live mode.

How to Search using Disk Analysis

1. Press the *Search* button to bring up the *Disk Analysis* and *Filters* menu.
2. Press *enter* to use the Disk Analysis screen.
3. Press the *left* and *right* arrow buttons to move the time cursor backward or forward through the available video.
4. Press the *Up* arrow button to zoom out and the *down* arrow button to zoom in.
5. Use *arrow* buttons to find the video you want to view, then press *enter* to preview the video. Press *Play* to begin playback.
6. Press a *camera* button to view the playback fullscreen.

How to Search using the Filters Screen

1. Press the *Search* button to bring up the *Disk Analysis* and *Filters* menu.
2. Press the *up/down* arrow buttons to select the desired filter. You can filter by *Date and Time*, *Cameras or Motion*, *Alarms/Events*, or *Text and Time of Day*.
3. Press *enter* to change the filter mode and settings.
4. Change the filter as desired and Press *Menu* button to return to the top level menu.
5. When you have set all the filters, Select *Search Now* and Press *enter*. The *Thumbnail Previews* screen will appear.
6. From the *Thumbnail Previews* screen select the video you which to review and press *enter* to begin previewing the video in playback.

How to archive from the Search screen

1. With the *Thumbnail Previews* screen displayed, use the playback controls to move the video to the desired *Start Time* for the archive and select *Set Start* then Press *enter*.
2. Now advance the video using the playback controls to the desired *Stop Time* for the archive and select *Set Stop* and Press *enter*.
3. Select *Archive* and press *enter*. You are now in the *Archive Screen*.
4. Either insert a blank optical disc in the DVD Burner slot or plug in a USB storage device into the front panel USB connector.
5. Press *enter* to change the media and Press *enter* to confirm the selection.
6. Press the *down* arrow to select the *Archive Name*. Press *enter* and use the on-screen keyboard to change the name of the file to be exported. Select *Done* and press *enter* when finished.

7. Press the *down* arrow to select the *Include Player* checkbox. Check to include the GE SymPlayer, or uncheck if you have previously installed the player or will play the video in SymNav.
8. Press the *down* arrow and use the *Camera List* block to select the cameras within the *Start and Stop* window to be exported. Be sure the *Archive Size* is smaller than the archive media. You may need to change the *Start* and *Stop* by returning to the *Thumbnail Previews* screen or select fewer camera channels to make it fit.
9. Press the *down* arrow until you *Select Archive Now*; Press *enter* to begin the export. You may safely remove the media once the *Archive Complete* message is shown.

How to use the Archive screen

1. Press the *Archive* button on the front panel. The *Archive Screen* will appear.
2. Insert a blank optical disc in the DVD Burner slot or plug in a USB storage device into the front panel USB connector.
3. Press *enter* to change the media and Press *enter* to confirm the selection.
4. Press the *down* arrow to select the *Archive Name*. Press *enter* and use the on-screen keyboard to change the name of the file to be exported. Select *Done* and press *enter* when finished.
5. Press the *down* arrow to select the archive length. The *Archive Stop Time* was set when you pressed the *Archive* button. Press *enter* and adjust the length to change the *Start Time*. Press *enter* to confirm the length.
6. Press the *down* arrow to select the *Include Player* checkbox. Check to include the GE SymPlayer, or uncheck if you have previously installed the player or will play the video in SymNav.
7. Press the *down* arrow and use the *Camera List* block to select the cameras within the *Start and Stop* window to be exported. Be sure the *Archive Size* is smaller than the archive media. You may need to change the *Start* and *Stop* by selecting fewer camera channels to make it fit.
8. Press the *down* arrow until you *Select Archive Now*; Press *enter* to begin the export. You may safely remove the media once the *Archive Complete* message is shown.

Chapter 4

Programming the SymDec 16 plus 4

This chapter provides an in-depth review of the On Screen Display (OSD). The OSD is used to program how the SymDec 16 plus 4 operates from setting up the password levels to the record rates of the cameras.

In this chapter:

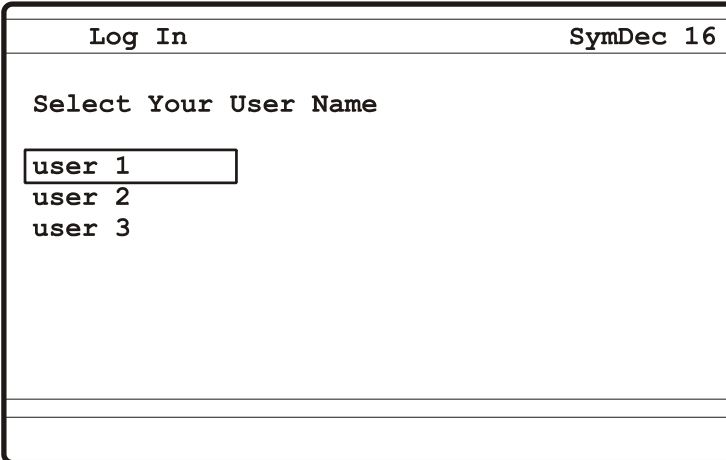
<i>Log In</i>	30
<i>Cameras menu</i>	33
<i>The Schedule menu</i>	45
<i>The Users menu</i>	55
<i>The Network menu</i>	57
<i>The Display menu</i>	67
<i>The System menu</i>	68
<i>The Info menu</i>	80

Log In

To program your SymDec 16 plus 4 you must first setup a user and create a password or PIN. Make sure, at a minimum, you have attached a monitor to view the OSD and applied power to the SymDec 16 plus 4. To setup a user, press the *Menu button* on the front panel. The initial *Log In* screen will appear.

Note: A maximum of 24 users can be logged in at the same time.

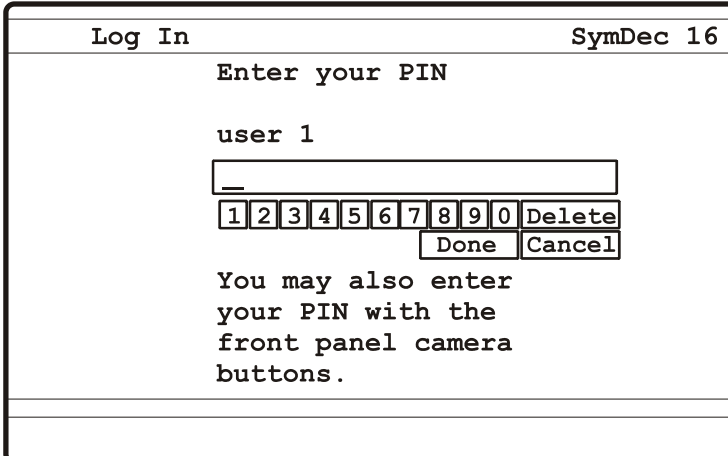
Figure 9. The Log In screen



The screenshot shows a screen titled "Log In" in the top left and "SymDec 16" in the top right. The main text reads "Select Your User Name". Below this, there are three options: "user 1", "user 2", and "user 3". The "user 1" option is highlighted with a rectangular box.

Use the arrow buttons to navigate, select a **user** and press the *Enter button*. The *Enter Your Pin* screen will appear.

Figure 10. The Enter Your Pin screen



The screenshot shows a screen titled "Log In" in the top left and "SymDec 16" in the top right. The main text reads "Enter your PIN". Below this, it says "user 1" followed by a rectangular input field. Under the input field is a row of buttons: "1", "2", "3", "4", "5", "6", "7", "8", "9", "0", and "Delete". Below these buttons are two more buttons: "Done" and "Cancel". At the bottom, there is a paragraph of text: "You may also enter your PIN with the front panel camera buttons."

Enter the default password by using the *Arrow* and *Enter* buttons. You can also use the camera buttons to enter the password.

Table 12. Default passwords

Password name	Default password (PIN)
User 1	111111
User 2	222222
User 3	333333

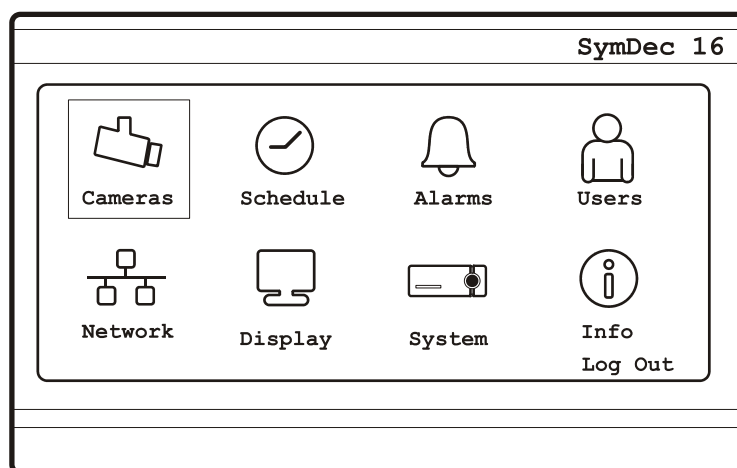
When completed, navigate to the *Done* button and press *Enter*. The *Main OSD menu* will appear.

Main Menu

The Main menu contains the following sub-menus:

- Cameras
- Schedule
- Alarms
- Users
- Network
- Display
- System
- Info

Figure 11. The Main menu

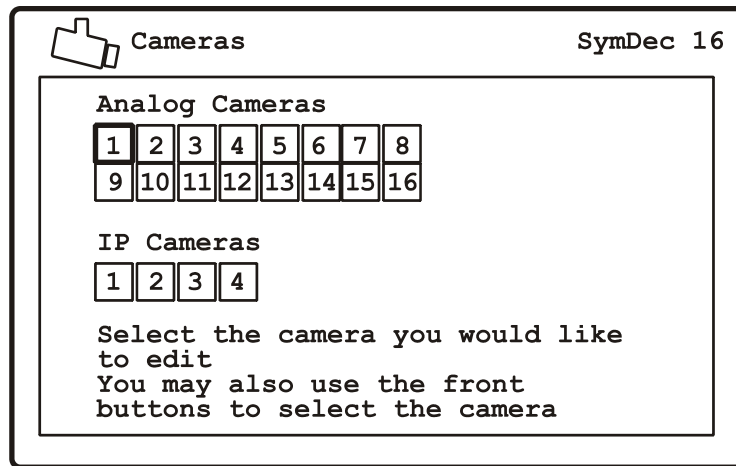


Note: GE recommends that after you have completed your initial Log In you should setup up your users, passwords, and access levels for security reasons. See [The Users menu](#) on page 55 for complete information.

Cameras menu

Highlight the *Cameras* icon on the Main menu and press the *enter* button. The *Cameras* menu will appear.

Figure 12. The Cameras menu



Select the camera type (analog or IP) and camera number which you wish to configure and press the *Enter* button. The analog camera or IP camera edit menu will display.

Note: The camera number can be selected by using the arrow buttons on the front panel, the camera number buttons on the front panel, or the camera number buttons on the remote controller.

Analog Camera menu

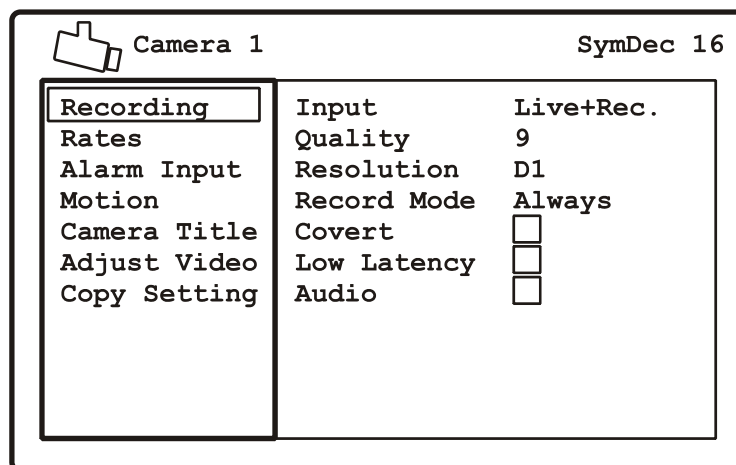
The Analog Camera menu contains the following options and their settings:

- Recording
- Rates
- Alarm Input
- Motion
- Camera Title
- Adjust Video
- Copy Setting

Recording Menu

Use this menu to select the recording input, record quality, resolution, and record mode. You can also use this menu to enable or disable the covert, low latency, and audio features of the camera selected.

Figure 13. The Camera/Recording menu



Camera 1 SymDec 16

Recording	Input	Live+Rec.
Rates	Quality	9
Alarm Input	Resolution	D1
Motion	Record Mode	Always
Camera Title	Covert	<input type="checkbox"/>
Adjust Video	Low Latency	<input type="checkbox"/>
Copy Setting	Audio	<input type="checkbox"/>

Table 13. Cameras/Recording options

Menu Setting	Options
Record Input	Live, Disable, Live + Record
Record Quality	1 (low quality) to 9 (high quality)
Resolution	D1 (704x480), 2CIF (704x240), CIF (352x240)
Record Mode	Always, Alarm only, Event + Alarm
Covert	Enable or disable. Covert means the camera is recording but the display is turned off.
Low latency	Enable or disable. Enabling low latency increases the response time but lowers the quality. Normally used with PTZ cameras.
Audio	Enable or disable audio recording on this camera. The audio option is only for Cameras 1-4.

Duration Rates

Use this menu to select the record rates under normal condition (timelapse rate) and when an alarm or event occurs. You can also set the pre and post recording times for both event and alarm conditions.

Figure 14. The Camera/Duration Rates menu

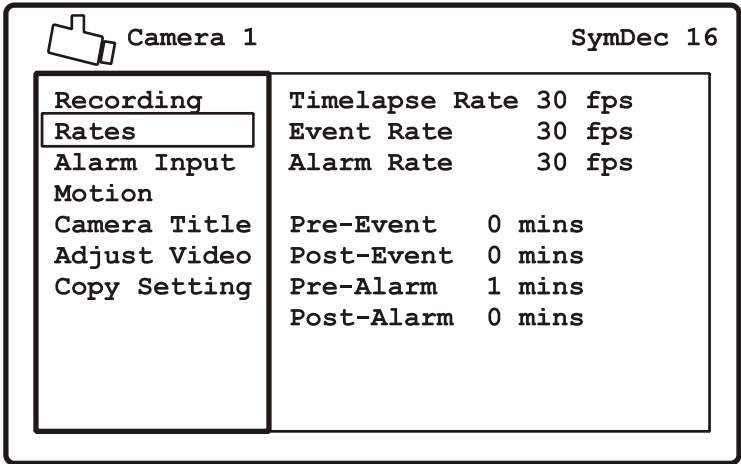


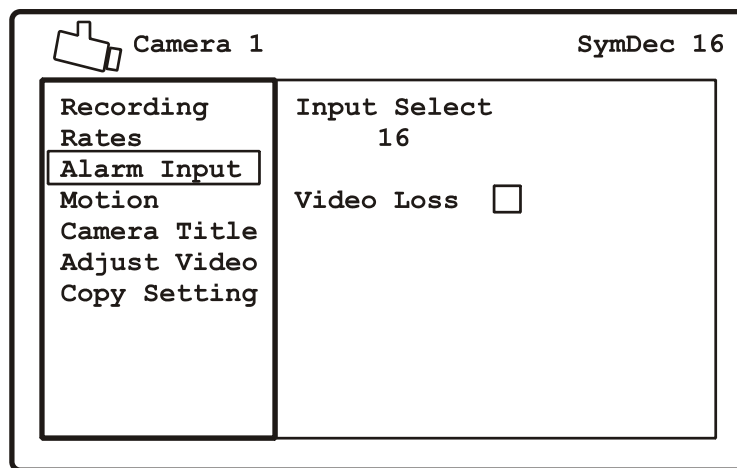
Table 14. The Cameras/Rates options

Menu Setting	Options
Timelapse Rate	2, 5, 10, 15, 30 fps (frames per second)
Event Rate	2, 5, 10, 15, 30 fps
Alarm Rate	2, 5, 10, 15, 30 fps
Pre-Event	0-5 minutes
Post-Event	0-5 minutes
Pre-Alarm	0-5 minutes
Post-Event	0-5 minutes

Alarm Input

Use this menu to connect 1 or more alarm inputs to the currently selected camera. Press the enter button to enter the edit mode. Select from alarm inputs 1-16 and IP alarms 1-4. You can also enable or disable video loss here. When video loss is enabled it will be reported as an alarm on the selected camera.

Figure 15. The Cameras/Alarm Inputs menu



The screenshot shows a menu interface for 'Camera 1' on a 'SymDec 16' device. The menu is divided into two main sections. The left section contains a list of options: 'Recording', 'Rates', 'Alarm Input' (which is highlighted with a rectangular border), 'Motion', 'Camera Title', 'Adjust Video', and 'Copy Setting'. The right section displays 'Input Select' with the value '16' below it, and 'Video Loss' with an unchecked checkbox to its right.

Menu Item	Value / Status
Recording	
Rates	
Alarm Input	
Motion	
Camera Title	
Adjust Video	
Copy Setting	
Input Select	16
Video Loss	<input type="checkbox"/>

Motion Detection

Use this menu to set up the various parameters associated with motion detection such as the trigger, sensitivity, target size, rejection threshold, and where on the video to monitor for motion.

Figure 16. The Cameras/Motion Detection menu

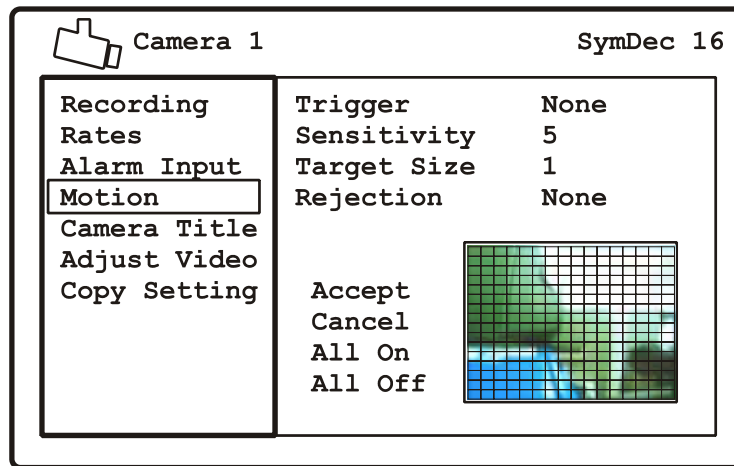



Table 15. The Cameras/motion detection options

Menu setting	Options
Trigger	None, Event, Alarm 1-16, IP Alarm 1-4
Sensitivity	1 (least) to 9 (most)
Target size	0-256. This setting is the minimum number of zones (from the 16 x 16 grid) that must be activated simultaneously before it is considered to be valid motion.
Rejection	None, low, medium, high. These settings are based on the number of simultaneously triggered zones and the persistence of motion in a scene. The Low setting is the most sensitive to motion. The Medium setting will filter out most false alarm situations due to sudden luminance changes over the whole scene (clouds passing over). The High setting will filter out sudden luminance changes as well as spurious motion events that do not persist for a number of frames (a bird flying past the lens).
Motion edit screen	<p>Press the enter button to move into edit mode. Use the arrow buttons to select or deselect the areas on the grid to set for motion detection. Press the enter button to cycle through the selection cursors:</p> <ul style="list-style-type: none"> • White outline: Use to position cursor for selection or deselection of a previously selected area • Blue: Selects areas on the grid for motion detection • Red: Cursor changes to red when parameter thresholds are achieved <p>Press the menu button to go to the commands in the edit window. Select from:</p> <ul style="list-style-type: none"> • Accept • Cancel • All On • All Off

Camera Title

Use this menu to change the camera title. Press the enter button to access the on-screen keypad to edit the title. Use the arrow buttons to navigate and the enter button to select the various alphanumeric characters available.

Figure 17. The Camera/Camera Title menu


Camera 1
SymDec 16

Recording
 Rates
 Alarm Input
 Motion
Camera Title
 Adjust Video
 Copy Setting

Title

Camera1

Shift		Delete		←		→				
1	2	3	4	5	6	7	8	9	0	Done
A	B	C	D	E	F	G	H	I	_	Cancel
J	K	L	M	N	O	P	Q	R	-	
S	T	U	V	W	X	Y	Z	,	.	\$ & #
Space									@ ! ?	

Adjust Video

Use this menu to adjust the selected cameras video image. You can also enable or disable the Automatic Gain Control (AGC) here.

Figure 18. The Camera/Adjust Video menu

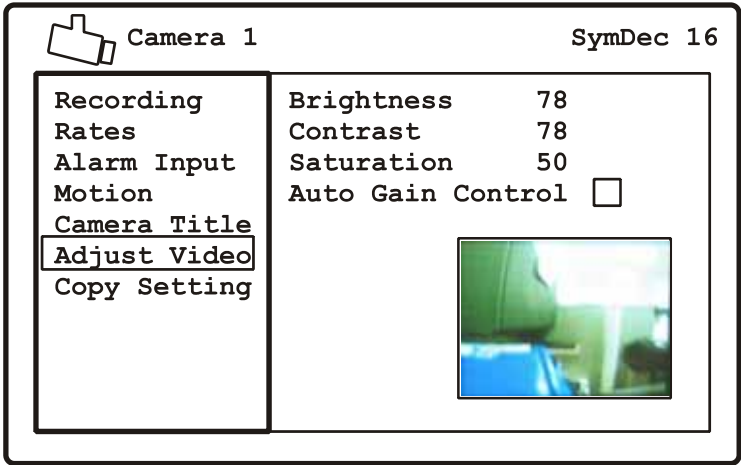


Table 16. The Camera/Adjust Video settings

Menu setting	Options
Brightness	0-99
Contrast	0-99
Saturation	0-99
Automatic Gain Control	Enable/disable

Copy Settings

Use this menu to quickly copy one cameras settings to the other available cameras. Press enter to access the edit area. Select the cameras to copy the selected camera's parameters. Navigate to the *Copy Now* command to execute.

Note: The *Copy Setting* command copies **all** the selected camera's configurable settings.

Figure 19. The Camera/Copy Settings menu

Camera 1
SymDec 16

Recording
Rates
Alarm Input
Motion
Camera Title
Adjust Video
Copy Setting

Copy To

Analog Cameras

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

IP Cameras

1	2	3	4
---	---	---	---

Copy Now

IP Camera menu


The IP Camera menu contains the following options and their settings:

- Recording
- Rates
- Alarm Input
- Camera Title
- Copy Setting

Recording

Use this menu to select the recording input, IP address, and record mode of the IP camera or video stream from a SymNet. You can also use this menu to enable or disable the covert feature of the IP camera selected.

Figure 20. The IP Camera/Recording menu

 IP Camera 1

SymDec 16

Recording

Rates

Alarm Input

Camera Title

Copy Setting

Input

Source Address

Record Mode

Covert

Disable

0.0.0.0

Always

☐

Table 17. Cameras/Recording options

Menu Setting	Options
Record Input	Live, Disable, Live + Record
Source Address	IP address of selected camera
Record Mode	Always, Alarm only, Event + Alarm
Covert	Enable or disable. Covert means the camera is recording but the display is turned off.

Duration Rates

Use this menu to set the pre and post recording times for both event and alarm conditions.

Figure 21. The IP Camera/Duration Rates menu

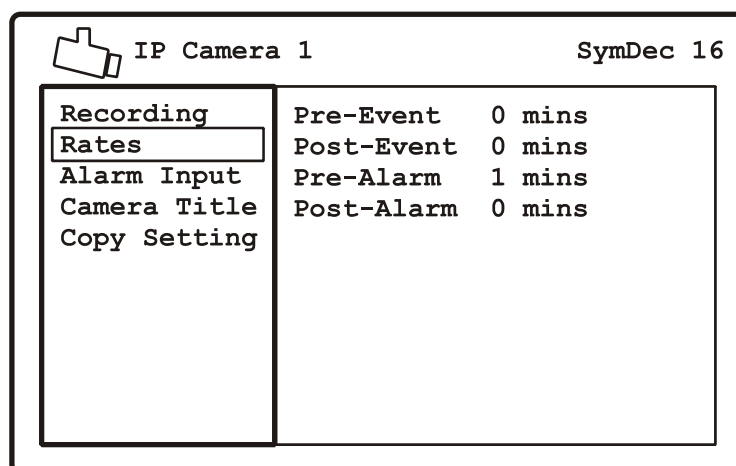


Table 18. IP Cameras/Duration Rates


Menu Setting	Options
Pre-Event	0-5 minutes
Post-Event	0-5 minutes
Pre-Alarm	0-5 minutes
Post-Event	0-5 minutes

Note: These settings will vary depending on the Time/Lapse settings.

IP Camera Alarm Input

Use this menu to connect 1 or more alarm inputs to the currently selected IP camera. Press the enter button to enter the edit mode. Select from alarm inputs 1-16 and IP rearms 1-4. You can also enable or disable video loss here. When video loss is enabled it will be reported as an alarm on the selected IP camera.

Figure 22. The IP Camera/Alarm Input menu

 IP Camera 1

SymDec 16

Recording
Rates
Alarm Input
Camera Title
Copy Setting


Input Select
16

Video Loss ☐

Camera Title

Use this menu to change the camera title. Press the enter button to access the on-screen keypad to edit the title. Use the arrow buttons to navigate and the enter button to select the various alphanumeric characters available.

Figure 23. The IP Camera/Camera Title menu

 IP Camera 1

SymDec 16

Recording
Rates
Alarm Input
Camera Title
Copy Setting

Title


Shift	Delete									←	→	
1	2	3	4	5	6	7	8	9	0	Done		
A	B	C	D	E	F	G	H	I	_	Cancel		
J	K	L	M	N	O	P	Q	R	-			
S	T	U	V	W	X	Y	Z	,	.	\$	&	#
Space										@	!	?

Copy Settings

Use this menu to quickly copy one camera's settings to other available cameras. Press *enter* to access the edit area. Select the cameras to copy the selected camera's parameters. Navigate to the *Copy Now* command to execute.

Note: The *Copy Setting* command copies **all** the selected camera's configurable settings.

Figure 24. The IP Camera/Copy Settings menu

 IP Camera 1
SymDec 16

Recording

Rates

Alarm Input

Camera Title

Copy Setting

Copy To
Analog Cameras

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

IP Cameras

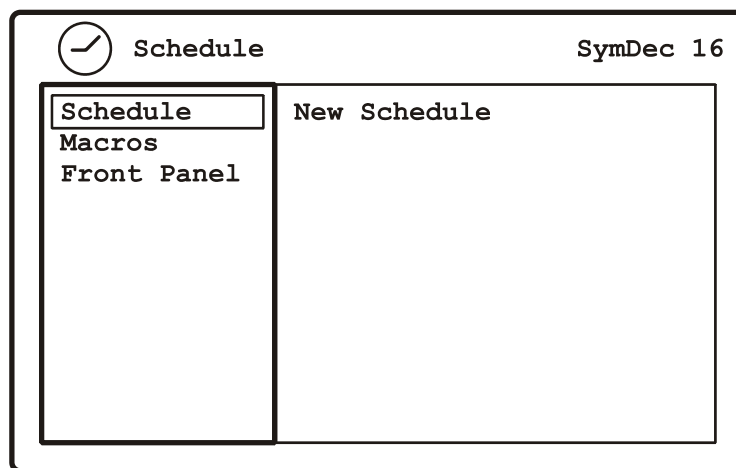
1	2	3	4
---	---	---	---

Copy Now

The Schedule menu

Use this menu to create and schedule macros. A macro is a recorded sequence of keystrokes. Highlight the *Schedule* icon and press the *enter* button. The *Schedule* menu will appear.

Figure 25. The Schedule menu



The Schedule menu contains the following options and their settings:

- New Schedule: Schedule start times for macros.
- Macros: Create and select macros.
- Front Panel: Assign a camera number button to a macro for front panel execution.

New Schedule

Use this menu to create or edit a schedule for a specific macro. Press enter to access the edit area.

Figure 26. The Schedule/New Schedule menu

Schedule

SymDec 16

Schedule

Macros

Front Panel

Enable☐

MacroNone

Time00:00:00

Freq.Daily

Save Schedule Macro

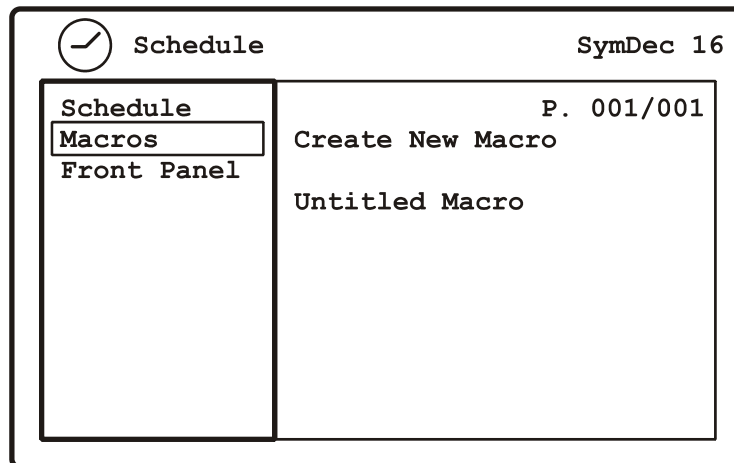
Table 19. The Schedule/New Schedule options

Menu Setting	Options
Enable	Enable or disable
Macros	None or Names of defined macros
Time	Define hour and minute of execution
Frequency	Daily, multiple days, specific date

Macros

Use this menu to create a new macro or edit a previously created macro. Press enter to access the edit area.

Figure 27. The Schedule/Macros Menu



Create new Macro

Use this menu to select various predefined macro features and record your macro.

Figure 28. The Schedule/Macro/Create New Macro menu

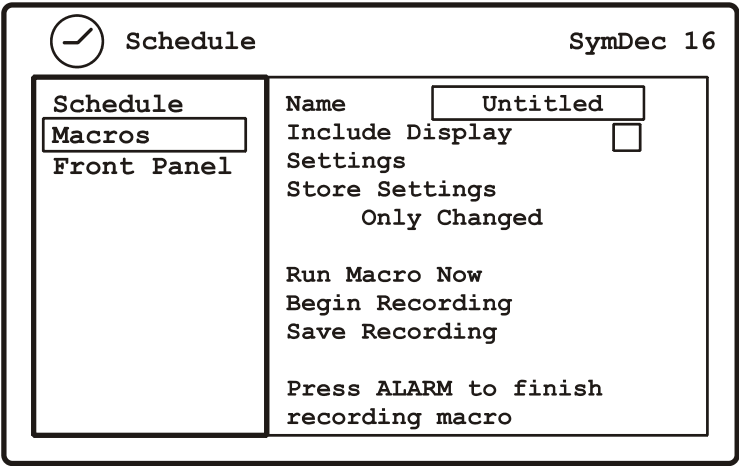


Table 20. The Schedule/Create New Macro menu options

Menu setting	Options
Name	Press enter to edit and use the keypad to assign a name to the macro
Include Display Settings	Check On or Off to show the display options selected in the <i>Display</i> menu.
Store Settings	<ul style="list-style-type: none">• All: Save all the settings in the macro programming tree.• Only changed: Saves only those settings that have been changed during the macro programming.
Run Macro Now	Select and press enter to run the macro immediately
Begin Recording	Select and press enter to start recording keystroke. Press the Alarm button to stop recording.
Save Recording	Select and press enter to save the macro

Edit Macro

Use this menu to edit previously created macros.

Figure 29. The Schedule/Macro/Edit Macro menu

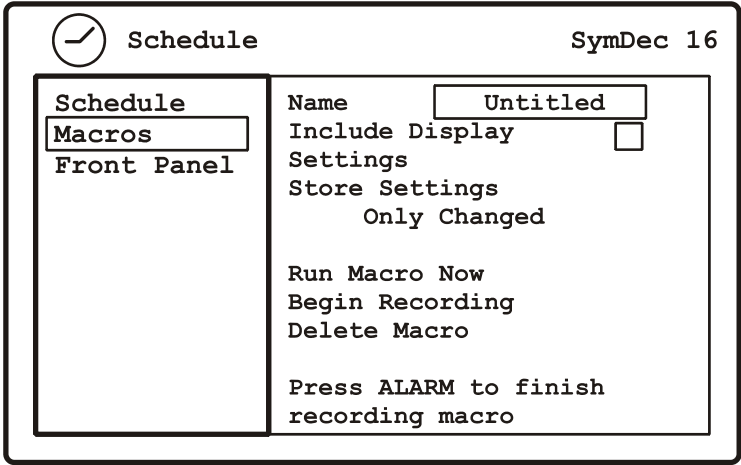


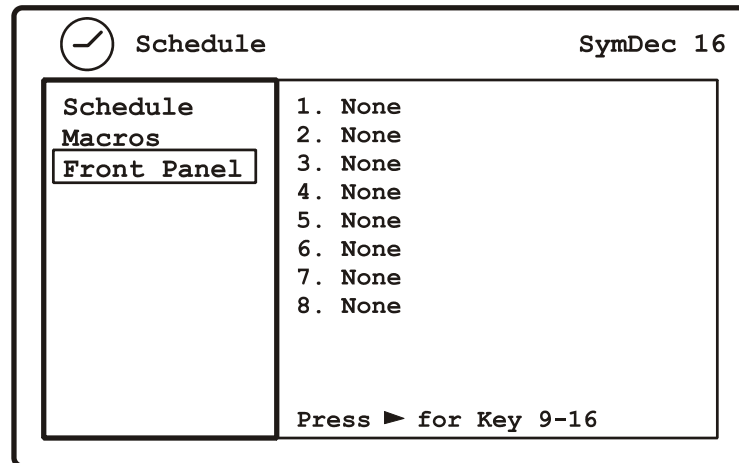
Table 21. The Schedule/Create New Macro menu options

Menu setting	Options
Name	Press enter to edit and use the keypad to change the name of the macro
Include Display Settings	Check On or Off to show the display options selected in the <i>Display</i> menu.
Store Settings	<ul style="list-style-type: none">• All: Save all the settings in the macro programming tree.• Only changed: Saves only those settings that have been changed during the macro programming.
Run Macro Now	Select and press enter to run the macro immediately
Begin Recording	Select and press enter to start recording keystroke. Press the Alarm button to stop recording.
Delete Macro	Select and press enter to delete the current macro

Front Panel

Use this menu to assign a camera button (1-16) to a created Macro. Once assigned hold down the camera button (2 sec.) to launch the macro.

Figure 30. The Schedule/Front Panel menu



How to schedule a macro

As an example, let's say that we want to turn camera 1 off at 7 p.m. and back on at 7 a.m. This requires that you:

1. Create a macro to turn camera 1 off and name it **Camera 1 Off**.
 - a. From the *Macros* screen press *enter* to move to edit mode.
 - b. Select *Create New Macro* and press *enter*.
 - c. In the *Name* field press *enter*.
 - d. Use the on-screen keypad to enter *Camera 1 Off*. Press *Done* when finished.
 - e. Navigate to *Begin Recording* and press *enter*.
 - f. Select *Camera* and press *enter*. Select camera 1.
 - g. Press *enter*, select *Input* and press *enter*. Select *Disable* and press *enter*.
 - h. Press the *Alarm* button to finish recording the macro.
 - i. Select *Save Macro* and press *enter*.
2. Create a macro to turn camera 1 off and name it **Camera 1 On**.
 - a. From the *Macros* screen press *enter* to move to edit mode.
 - b. Select *Create New Macro* and press *enter*.
 - c. In the *Name* field press *enter*.

- d. Use the on-screen keypad to enter *Camera 1 On Press Done* when finished.
 - e. Navigate to *Begin Recording* and press *enter*.
 - f. Select *Camera* and press *enter*. Select camera 1.
 - g. Press *enter*, select *Input* and press *enter*. Select *Live + Rec.* and press *enter*.
 - h. Press the *Alarm* button to finish recording the macro.
 - i. Select *Save Macro* and press *enter*.
3. Schedule macro **Camera 1 Off**.
- a. Navigate to the *Schedule* menu and press *enter* on *New Schedule* to move to edit mode.
 - b. Press *enter* to enable the schedule.
 - c. Move the cursor to the *Macro* command and press *enter*.
 - d. Select *Camera 1 Off* and press *enter*.
 - e. Move the cursor to the *Time* command and press *enter*.
 - f. Use the *arrow buttons* to select 7 p.m. and press *enter*.
 - g. Move the cursor to the *Save Schedule Macros* command and press *enter*.
4. Schedule macro **Camera 1 On**.
- a. Navigate to the *Schedule* menu and press *enter* on *New Schedule* to move to edit mode.
 - b. Press *enter* to enable the schedule.
 - c. Move the cursor to the *Macro* command and press *enter*.
 - d. Select *Camera 1 Off* and press *enter*.
 - e. Move the cursor to the *Time* command and press *enter*.
 - f. Use the *arrow buttons* to select 7 a.m. and press *enter*.
 - g. Move the cursor to the *Save Schedule Macros* command and press *enter*.

The macros **Camera 1 Off** and **Camera 1 On** are now scheduled to run at their selected times.

The Alarms menu

Highlight the *Alarm* icon and press the *enter* button. The *Alarm* menu will appear. The Alarm menu contains the following menus:

- Notification
- Silent Alarm
- Alarm Inputs and Outputs

Notification

Use this menu to assign the listed incidences to a specific output (Buzzer, Email, Alarm Output 1-4).

Figure 31. The Alarms/Notification menu

Alarms		SymDec 16
Notification		
Silent Alarm	Disk Fail	B E 1 2 3 4
Alarm In/Out	Disk Full	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Net Fail	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Fan Fail	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Power On	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Lockout	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Table 22. Notification descriptions

Notification	Description
Disk Fail	When a hard disk failure is detected.
Disk Full	When a hard disk is at capacity.
Net Fail	When a network failure is detected.
Fan Fail	When a fan failure is detected.
Power On	On shutdown a flag is set to indicate successful shutdown. If no flag is detected at bootup, power failure is assumed.
Lockout	Three repeated login failures locks the unit for 30 minutes and sends a notification.

Silent Alarm

Use this menu to enable or disable an alarm (buzzer) that has been linked to Camera or Silent Alarms.

Figure 32. The Alarms/Silent Alarm menu

Alarms

SymDec 16

Notification
Silent Alarm
Alarm In/Out

Cam Alarms
Sys Alarms

☐
☐

Alarm Inputs and Outputs

Use this menu to attach the specified alarm inputs and outputs to the selected camera.

Figure 33. The Alarms/Alarms Inputs and Outputs menu

Alarms

SymDec 16

Notification
Silent Alarm
Alarm In/Out

Analog Cameras

12345678

910111213141516

IP Cameras

1234

Select the alarms you
would like to edit
You may also use the
front buttons to select

Note: Select Analog or IP and camera number

Figure 34. The Alarms/Alarms Inputs and Outputs menu after camera selection

Alarms
SymDec 16

Notification	Input Mode	Latched
Silent Alarm	Input Type	NO
Alarm In/Out	Timeout	1 mins
	Macro	None
	Protect	<input type="checkbox"/>
	Buzzer	<input type="checkbox"/>
	Email	<input type="checkbox"/>
	Alarm Out 1	<input type="checkbox"/>
	Alarm Out 2	<input type="checkbox"/>
	Alarm Out 3	<input type="checkbox"/>
	Alarm Out 4	<input type="checkbox"/>
	PTZ Presets	None


Table 23. The Alarms/Alarms Inputs and Outputs menu options

Menu Option	Setting
Input Mode	<ul style="list-style-type: none"> Latched: The alarm is activated until it is silenced and acknowledged. Transparent: The alarm is active only while receiving alarm input Timeout: The alarm condition is latched for the amount of time specified in the <i>Timeout</i> field.
Input type	Normally Open, Normally Closed
Timeout	0-59 minutes if Timeout selected in Input mode
Macro	None, Select Macro name (to select Macro Name you must have created and named a macro in the <i>Schedule/Macros</i> menu)
Protect	Enable or Disable
Buzzer	Enable or Disable
Email	Enable or Disable
Alarm Out 1	Enable or Disable
Alarm Out 2	Enable or Disable
Alarm Out 3	Enable or Disable
Alarm Out 4	Enable or Disable
PTZ Presets	Enable, Address Presets, Presets 1-4 (launches the PTZ preset submenu where you can assign an <i>Enable flag</i> , <i>Bus address</i> , <i>PTZ address</i> , and <i>Preset number</i>).

The Users menu

Highlight the *Users* icon and press the *enter* button. The *Users* menu will appear. Up to 24 users can be logged on to a SymDec 16 plus 4 at one time.

Figure 35. The Users menu

 **Users**

SymDec 16

Add New User

User 1

User 2

User 3

Login Name

Password

Access Level Operator

Timeout 0 mins

Save User


The Users menu contains the following options and their settings:

- Add New User
- Edit Users 1-3

Add New User

Use this menu to add a new user, assign a password, and select the users access level. Press enter to enter the edit window and use the keypad to create the user’s name.

Figure 36. The Users/Add New User menu

 **Users**

SymDec 16

Add New User

User 1

User 2

User 3


User Name

Shift	Delete	←	→							
1	2	3	4	5	6	7	8	9	0	Done
A	B	C	D	E	F	G	H	I	_	Cancel
J	K	L	M	N	O	P	Q	R	-	
S	T	U	V	W	X	Y	Z	,	.	\$ & #
Space										@ ! ?

Edit Users

Use this menu to edit a user’s name, password, access level, and timeout. You can also delete a user from this menu.

Figure 37. The User/Edit User

 **Users**

SymDec 16

Add New User

User 1

User 2

User 3

Login Name user 1

Password *****

Access Level Admin

Timeout 0 mins

Remove this User

Table 24. The User/Edit User options

Menu options	Settings
Login Name	Press enter to enter the edit window and use the keypad to edit the user’s name.
Password	Enter from 4 to 8 characters.
Access Level	<ul style="list-style-type: none">• Operator: Access to Display Info menus only• Manager: Access to Users, Display, and Info menus only• Administrator: Full access to all menus
Timeout	0-999 minutes. At 0 minutes the unit will never timeout (log out).
Remove this User	Select to delete user.

The Network menu

Highlight the *Network* icon and press the *enter button*. The *Network* menu will appear. The Network menu contains the following options and their settings:

- IP Settings
- IP Advanced
- Services
- Streaming
- Passthrough
- Notification
- Email Setup
- Notification Setup

IP Settings

Use this menu to setup the basic IP addresses and set the Ethernet password.

Figure 38. The Network/IP Settings menu

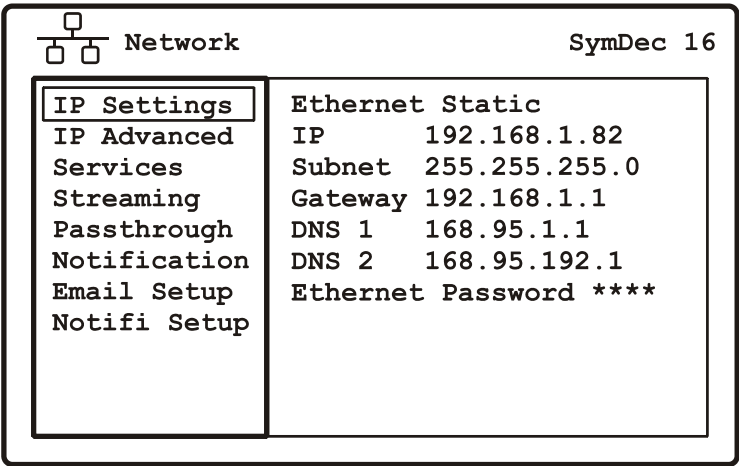


Table 25. The Network/IP Settings menu options

Menu options	Settings
Ethernet mode	Disabled, Static, DHCP, and PPPoE
IP Address	Consult with a qualified network administrator or IT professional to configure these settings if DHCP is not selected.
Subnet Mask	Consult with a qualified network administrator or IT professional to configure these settings if DHCP is not selected.
Gateway	Consult with a qualified network administrator or IT professional to configure these settings if DHCP is not selected.
Dynamic Name Server 1	Consult with a qualified network administrator or IT professional to configure these settings if DHCP is not selected.
Dynamic Name Server 2	Consult with a qualified network administrator or IT professional to configure these settings if DHCP is not selected.
Ethernet Password	Enter 4 to 8 characters to enable.

IP Advanced

Use this menu to configure these advanced network settings. Consult with a qualified network administrator or IT professional to configure these settings.

Figure 39. The Network/IP Advanced menu

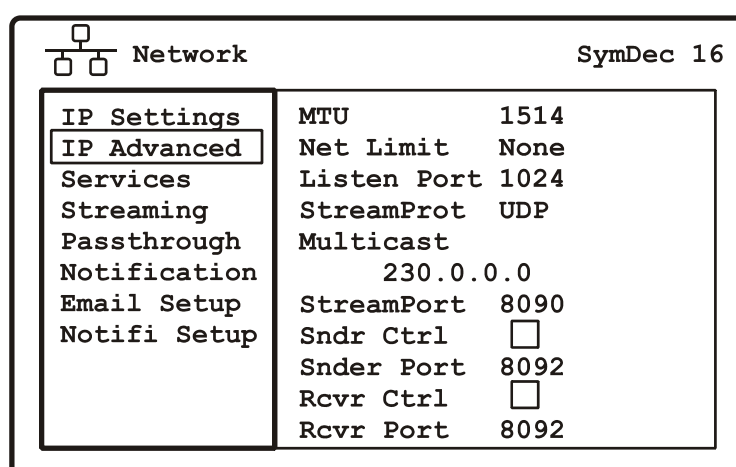


Table 26. The Network/IP Advanced menu options

Menu Options	Settings
MTU	1514 is the default. Sets the maximum TCP packet size.
Net Limit	None, 0-3999 Kbps.
Listen Port	1024 is the default. This is the port that the SymDec 16 uses to listen for streaming commands
Streaming Protocol	UDP, TCP
Multicast IP address	230.0.0.0. is the default. This must match between devices.
Streaming Port	8090 is the default setting for the stream.
Sender Control	Enable or Disable. Must be enable to send IP video.
Sender Port	8092 is the default setting. If you change this port here make sure you also change to match on the Receiver device.
Receiver Control	Enable or Disable. Must be enabled to receive IP video.
Receiver Port	8092 is the default setting. If you change this port here make sure you also change to match on the Sender device.

Muticast Video Streaming Overview

Video streaming is a new concept to many, so we have included the following overview. A certain level of IP network knowledge is required to properly set up video streaming

Video Streaming is the process that the SymDec family, including SymNet and the Symveo IP camera use to listen on a specific UDP/TCP port for control messages and respond to them. The communication over this protocol can be between a PC application, such as SymNav software and any of the above products. The UDP/TCP port is configurable. The default port setting is 8092. IP Multicast is also supported.

IP Multicast

IP multicast is a bandwidth-conserving technology that reduces traffic by simultaneously delivering a single stream of information to thousands of recipients. IP Multicast delivers source traffic to multiple receivers without adding any additional burden on the source or the receivers while using the least network bandwidth of any competing technology. High-bandwidth applications, such as MPEG video, may require a large portion of the available network bandwidth for a single stream.

Note: Configured incorrectly IP multicast can become a serious drain on your networks resources! If you are at all uncertain on how to setup IP multicast, please contact your network administrator or IS professional.

The Internet Assigned Numbers Authority (IANA) controls the assignment of IP multicast addresses. It has assigned the Class D address space to be used for IP multicast. This means that all IP multicast group addresses will fall in the range of 224.0.0.0 to 239.255.255.255. This address range is only used for the group address or destination address of IP multicast traffic. The source address for multicast video is always the source or senders IP address.

UDP Sender and UDP Receiver Overview

UDP (User Datagram Protocol), is a connectionless protocol that, like TCP, runs on top of IP networks. Unlike TCP/IP, UDP/IP provides very few error recovery services, offering instead a direct way to send and receive datagrams over an IP network. It's used primarily for broadcasting messages over a network. A UDP sender sends out digital video over an IP network. A UDP sender can be the SymDec-1, SymDec 4, SymDec 16 plus 4, Symveo IP Camera, or SymNet (Encoder). A UDP receiver is typically a SymDec-1, SymNav software, or a SymDec 4, which can display and record the streamed video. The SymNet (Decoder) can also be setup as a receiver, but it can only display the streamed video since it does not have recording capability.

To prevent a waste of network resources, the UDP sender does not send out streaming video until a receiver informs the sender that it is interested in receiving the stream. The UDP receiver sends out a *START* message every 30 seconds to the IP address in its streaming settings menu. The streaming settings page is located on the receiving device's web page.

When a sender receives a *START* message, it will start streaming out to the receiver's that are requesting it. When the sender does not receive any *START* message for one minute, it will stop sending to that device.

To speed up the initialization process after bootup and configuration changes, The UDP sender sends out a *READY_TO_SEND* message to the multicast IP address. When the receiver gets this message, it will send out the *START* message immediately if it is configured to receive from that sender (It does not wait for 30 seconds).

Note: The above information also applies if your Sender and Receiver are configured to use TCP instead of UDP.

SymNav software

SymNav software is the next generation of software that supports MPEG4 based video compression. The Symdec-1, SymDec 4, SymDec 16 plus, SymNet, and SymVeo IP Camera all use MPEG4 compression.

SymNav software also connects to these products using UDP/TCP protocols depending on what is configured. The default setting is UDP. Changing from UDP to TCP or TCP to UDP is accomplished through the SymNav software application.

SymNav software can connect to a maximum of 4 video streams. This can be 4 separate SymDec units with 1 stream each or 2 SymDecs with 2 streams each.

Services

Use this menu to define the parameters of the networks services. Consult with a qualified network administrator or IT professional to configure these settings

Figure 40. The Network/Services menu

Network SymDec 16

IP Settings	HTTP Port 80
IP Advanced	NTP Srvr 1
Services	220.130.158.52
Streaming	NTP Srvr 2
Passthrough	216.52.237.153
Notification	Interval Once Per Day
Email Setup	Name Srvc Disabled
Notifi Setup	Hostname -----

Table 27. The Network/Services menu options

Menu Options	Settings
HTTP Port	80 is the default. Select from 0 to 65535
NTP Server 1 IP Address	IP Address
NTP Server 2 IP Address	IP address
Interval	Never, Once per Hour, Twice per Day, Once per Day
Name Service	Disabled, DynDNS, TZO, GnuDIP
Hostname	The default hostname is the unit's serial number.

Streaming

Use this menu to enable streaming output on an IP camera.

Figure 41. The Network/Streaming menu

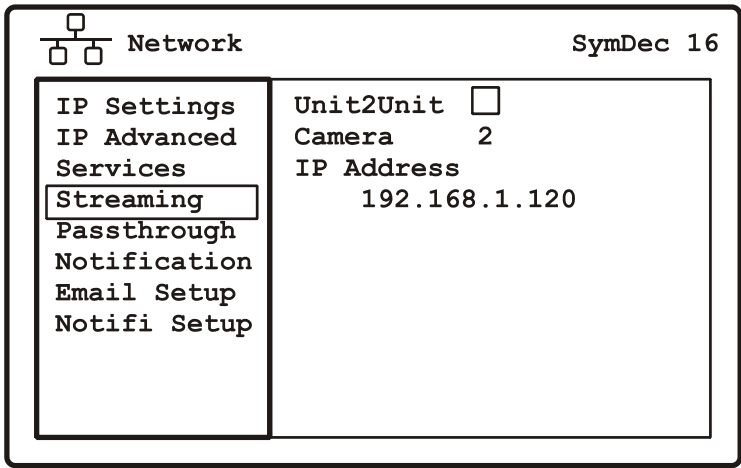


Table 28. The Network/Streaming menu options

Menu Options	Settings
Unit 2 Unit	Enable or Disable streaming
Camera	1 to 16
IP Address	Select the IP address of the camera

To receive unicast video from another unit

1. Go to *Cameras/IP Camera 1*. Set the source address to the physical address of the unit sending a unicast video stream. You can repeat this for IP Cameras 2 to 4.

To receive multicast video from different units

1. Navigate to the *Network/IP Advanced/Multicast setting*. Set the Multicast address of the stream you are going to receive to 230.123.456.789.

Note: Note that if there are four units sending multicast streams, each unit must have the same multicast stream address.

2. Navigate to *Cameras/IP Camera 1*. Set the source address to the physical address of the unit sending a multicast video stream. You can repeat this for IP Cameras 2 to 4.

Serial Passthrough

Use this menu to select the serial passthrough mode, remote IP address, port number, serial port type, and autoconnect enable/disable.

Serial pass-through functionality is for receiving or sending serial commands such as PTZ commands over the Internet. To setup serial pass-through;

1. Set the Mode to *Sender* or to *Receiver*. This is for the SymDec 16 plus 4 to either send or receive data.
2. Select the Remote IP and the Port number of the unit you want to send/receive serial pass-through data. Both units must have the same port number.
3. The Serial Port option specifies which port you want to send/receive serial data.
4. Make sure that the *Auto-Connect* checkbox is checked as it maintains the serial port as active.

Figure 42. The Network/Serial Passthrough menu

Table 29. The Network/Serial Passthrough menu options

Menu Options	Settings
Mode	Receiver or Sender
Remote IP	Enter the IP address of the remote device
Port	9000
Serial Port	RS-232, RS-485/422 Bus 1, RS-485/422 Bus 2, None
Auto Connect	Enable or Disable

Email/TCP Notification

Use this menu to select the method of notification (email or TCP) for the following incidents:

- Notify on Record
- Notify on Archive
- Notify on Menu Access
- Notify on Power Up
- Notify on Connection
- Notify on Alarm
- Notify on Video Loss

Select a checkmark in either box to enable.

Figure 43. The Network/Notification menu

	Email	TCP
Record	<input type="checkbox"/>	<input type="checkbox"/>
Archive	<input type="checkbox"/>	<input type="checkbox"/>
Menu Access	<input type="checkbox"/>	<input type="checkbox"/>
Power Up	<input type="checkbox"/>	<input type="checkbox"/>
Connect	<input type="checkbox"/>	<input type="checkbox"/>
Alarm	<input type="checkbox"/>	<input type="checkbox"/>
Video Loss	<input type="checkbox"/>	<input type="checkbox"/>

Email Setup

Use this menu to setup the email locations where notifications will be sent.

Figure 44. The Network/Email Setup menu

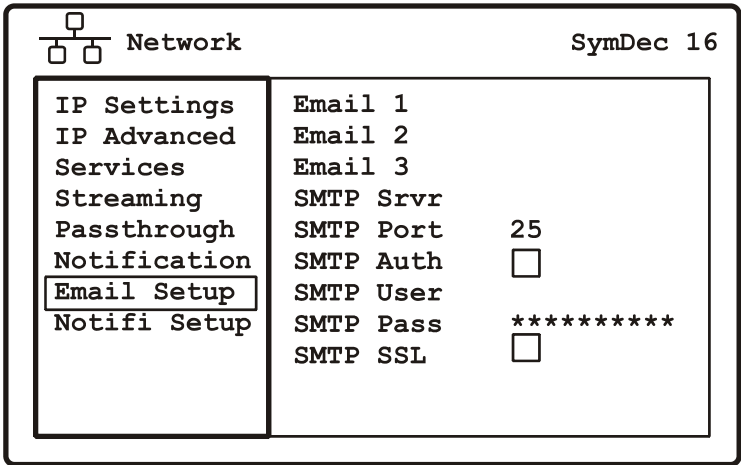


Table 30. The Network/Email Setup menu options

Menu Options	Settings
Email 1	1st email address
Email 2	2nd E-mail address
Email 3	3rd email address
SMTP Server	Enter a valid Simple Mail Transfer Protocol (SMTP) name
SMTP Port	Default is 25
SMTP Authorization	Check to enable or disable
SMTP User	Enter a valid SMTP username
SMTP Password	1 to 10 characters
SMTP SSL	Enable or disable SSL (Secure Sockets Layer) encryption

Notification Setup

Use this menu to setup the TCP/IP addresses where notification is to be sent.

Figure 45. The Network/Notification Setup menu

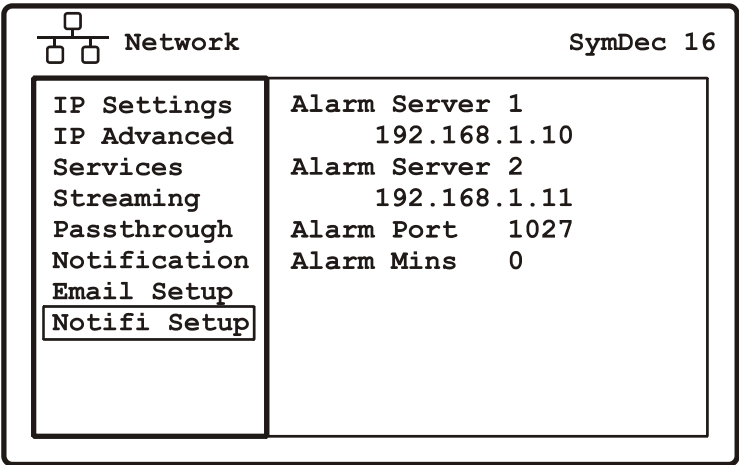


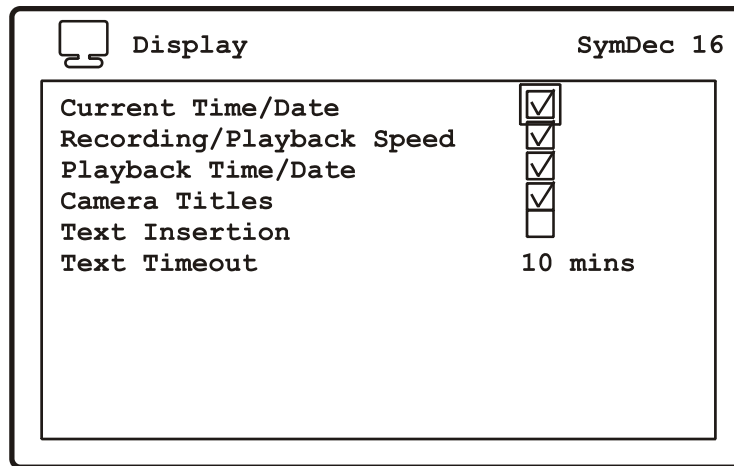
Table 31. The Network/Notification Setup menu options

Menu Options	Settings
Alarm Server 1	Enter a primary alarm server IP address
Alarm Server 2	Enter a backup alarm server IP address
Alarm port	Default is 1027. Choose from 1024 to 32767.
Alarm Minutes	0 to 299. Minutes after the event to send notification

The Display menu

Highlight the *Display* icon and press the *enter* button. The *Display* menu will appear.

Figure 46. The Display menu



The Display menu contains the following options and their settings:

- Current Time/Date
- Record/Playback Speed
- Playback Time/Date
- Camera Titles
- Text Insertion: Inserts serial -based text.
- Text Timeout: 0-99 minutes (the length of time the text is displayed in minutes)

Enter a checkmark in the box to enable.

The System menu

Highlight the *System* icon and press the *enter* button. The *System* menu will appear. The *System* menu contains the following options and their settings:

Front Panel

Use this menu to setup the front panel features. The remote control ID setup is also configured here.

Figure 47. The System/Front Panel menu

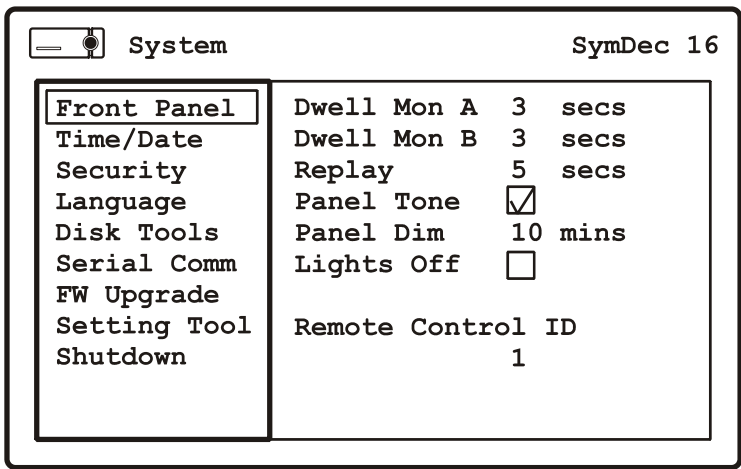


Table 32. The System/Front Panel menu options

Menu Options	Settings
Dwell Monitor A	0-99 seconds
Dwell Monitor B	0-99 seconds
Replay	0-999 seconds
Panel Tone	Enable or disable
Panel Dim	N/A
Lights Off	Enable or disable
Remote COnrol ID	Select from disable, and 1 to 4

Time/Date

Use this menu to setup the time and date features of the SymDec 16 plus 4.

Figure 48. The System/Time and Date menu

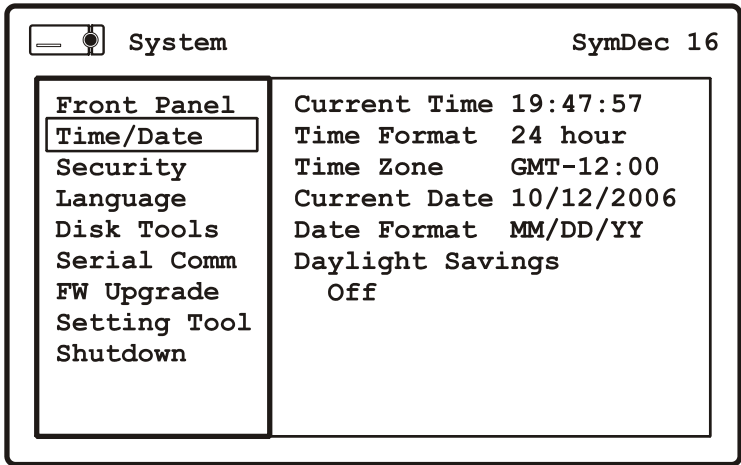


Table 33. The System/Time and Date menu options

Menu Options	Settings
Current Time	Press the enter button when selected to enter the time.
Time Format	12 or 24

Table 33. The System/Time and Date menu options

Menu Options	Settings
Time Zone	<ul style="list-style-type: none"> • GMT: Casablanca, Monrovia, Dublin, Edinburgh, Lisbon, London • GMT-01:00: Azores, Cape Verde Is. • GMT-02:00: Mid-Atlantic • GMT-03:00: Brasilia, Buenos Aires, Georgetown, Greenland • GMT-03:30: Newfoundland • GMT-04:00: Atlantic Time (Canada), Caracas, La Paz, Santiago • GMT-05:00: Bogata, Lima, Quito, Eastern Time (US & Canada), Indiana (East) • GMT-06:00: Central America, Central Time (US & Canada), Mexico City, Saskatchewan • GMT-07:00: Arizona, Mountain Time (US & Canada) • GMT-08:00: Pacific Time (US & Canada), Tijuana • GMT-09:00: Alaska • GMT-10:00: Hawaii • GMT-11:00: Midway Island, Samoa • GMT-12:00: Eniwetok, Kwajalein • GMT+01:00: Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna, Belgrade, Bratislava, Budapest, Ljubljana, Prague, Brussels, Copenhagen, Madrid, Paris, Sarajevo, Skopje, Sofija, Vilnius, Warsaw, Zagreb, West Central Africa • GMT+02:00: Athens, Istanbul, Minsk, Bucharest, Cairo, Harare, Pretoria, Helsinki, Riga, Tallinn, Jerusalem • GMT+03:00: Baghdad, Kuwait, Riyadh, Moscow, St. Petersburg, Volgograd, Nairobi • GMT+03:30: Tehran • GMT+04:00: Abu Dhabi, Muscat, Baku, Tbilisi, Yerevan • GMT+04:30: Kabul • GMT+05:00: Ekaterinburg, Islamabad, Karachi, Tashkent • GMT+05:30: Calcutta, Chennai, Mumbai, New Delhi • GMT+05:45: Kathmandu • GMT+06:00: Almaty, Novosibirsk, Astana, Dhaka, Sri Jayawardenepura • GMT+06:30: Rangoon • GMT+07:00: Bangkok, Hanoi, Jakarta, Krasnoyarsk • GMT+08:00: Beijing, Chongqing, Hong Kong, Urumqi, Irkutsk, Ulaan Bataar, Kuala Lumpur, Singapore, Perth, Taipei • GMT+09:00: Osaka, Sapporo, Tokyo, Seoul, Yakutsk • GMT+09:30: Adelaide, Darwin • GMT+10:00: Brisbane, Canberra, Melbourne, Sydney, Guam, Port Moresby, Hobart, Vladivosstok • GMT+11:00: Magadan, Solomon Is, New Caledonia
Current Date	Press the enter button when selected to enter the date
Date Format	MM/DD/YYYY or YYYY/MM/DD
Daylight Savings Time	Select Off, U.S.A., North America, Europe, Australia, New Zealand, or Russia

Note: North America is DST times from 2006, USA is set for the newly proposed dates in 2007.

Security

Use this menu to setup the security features of the SymDec 16 plus 4. This menu allows you to select the user type (Administrator, Operator, Manager) to allow access to these features. Selecting *Any* allows any user type access to modify these security operations.

Figure 49. The System/Security menu

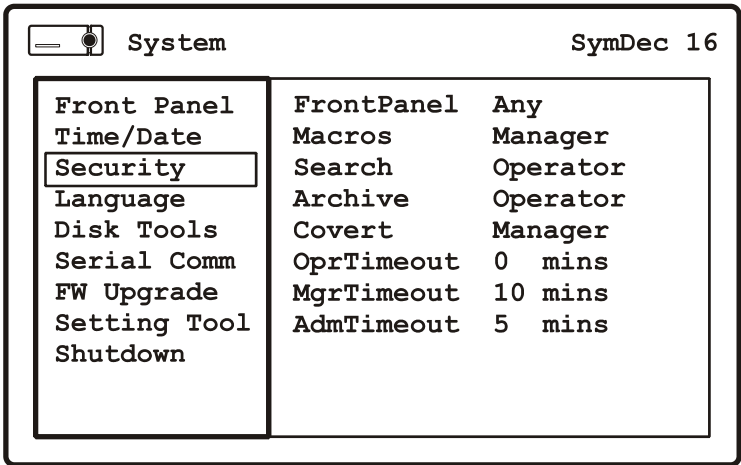


Table 34. The System/Security men options

Menu Options	Settings
Front Panel	Any, Administrator, Operator, Manager
Macros	Any, Administrator, Operator, Manager
Search	Any, Administrator, Operator, Manager
Archive	Any, Administrator, Operator, Manager
Covert	Any, Administrator, Operator, Manager
Operator Timeout	0-999 minutes
Manager Timeout	0-999 minutes
Administrator Timeout	0-999 minutes

Languages

Use this menu to setup the language and currency usage

Figure 50. The System/Language menu

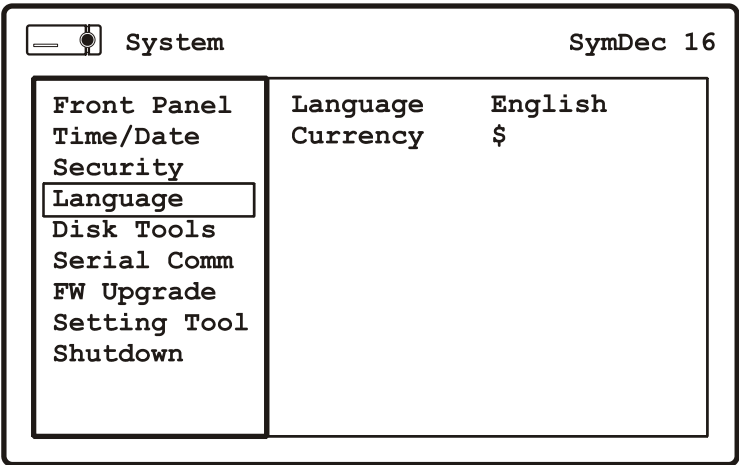


Table 35. The System/Language men options

Menu Options	Settings
Language	English
Currency	\$ (select currency type for text insertion purposes)

Disk Tools

Use this menu to access the SymDec 16 plus 4’s hard disk maintenance features.

Figure 51. The System/Disk Tools menu

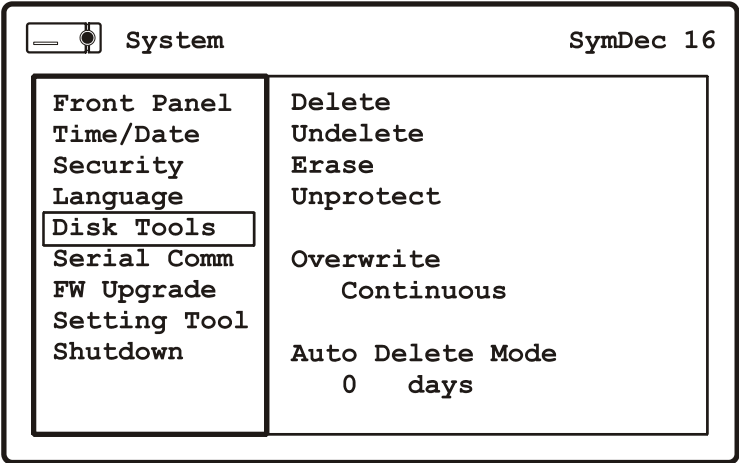


Table 36. The System/Disk Tools men options

Menu Options	Settings
Delete	Select and press the enter button to delete all data on the hard drives. Requires PIN number.
Undelete	Select and press the enter button to undelete all data on the hard drives. Only works after a delete command. Requires PIN number.
Erase	Select and press the enter button to erase all data on the hard drives. Requires PIN number. Data is not recoverable with the Undelete command.
Unprotect/Protect	All, By Clip, By Range (Protects/unprotects selections from deletion on hard disk)
Overwrite	<p>Continuous:</p> <ul style="list-style-type: none"> Recording always starts at end of last recording. The unit overwrites all previously recorded data. The unit overwrites newly recorded data (data from the current record session). Unit never stops recording. <p>Write Once:</p> <ul style="list-style-type: none"> Recording always starts at end of last recording. The unit overwrites all previously recorded data. Recording stops before the unit overwrites any of the newly recorded data (data from the current record session). When the end of the disk is reached, the unit displays an on-screen message indicating that the disk is full, and the unit has stopped recording. User must acknowledge the on-screen message by clicking the Enter button. The unit will continue recording again when the user clicks the Record button. <p>No Overwrite:</p> <ul style="list-style-type: none"> Recording always starts at end of last recording. Recording stops when end of disk is reached (when disk is full). When the end of the disk is reached, the unit displays an on-screen message indicating that the disk is full, and the unit has stopped recording. User must acknowledge the on-screen message by pressing the Enter button. Unit will not record over previously recorded data.
Auto Delete Mode (ADM)	0-999 days (prevents the unit from displaying or archiving any data that is more than the selected number of days old. This feature may be required by law in some jurisdictions, please consult with the local authorities).

Serial Communications

Use these menus to setup the serial communication properties of the SymDec 16 plus 4.

RS-485/RS-422

This menu sets the I/O connector on the rear panel to RS-485 or RS-422.

Figure 52. The System/RS-485 and RS-422 menu

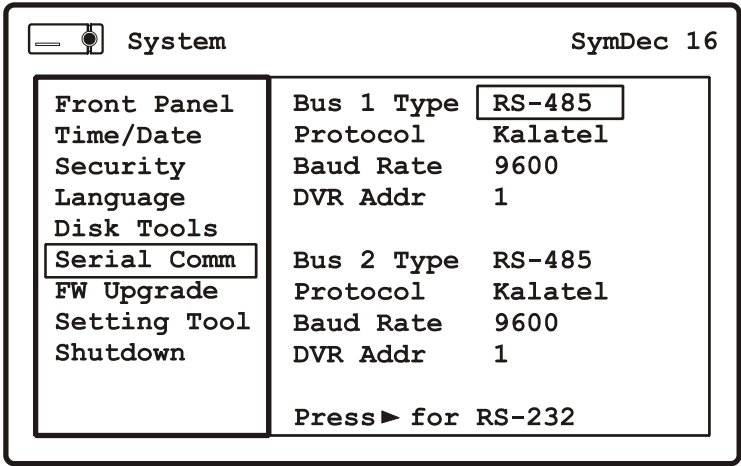


Table 37. The System/RS-485 and RS-422 menu options

Menu Options	Settings
Bus 1 Type	RS-485 or RS-422
Protocol	Kalatel or Passthrough (Kalatel is used for controlling PTZ cameras using SymNav. Passthrough is referring to serial passthrough which is setup in the <i>Network/Passthrough</i> dialog. If you set Bus 1 to serial passthrough then the Protocol options must be set to Passthrough.
Baud Rate	300, 1200, 2400, 4800, 9600
DVR Address	0-199
Bus 2 Type	RS-485 or RS-422
Protocol	Kalatel or Passthrough
Baud Rate	300, 1200, 2400, 4800, 9600
DVR Address	0-199 (Dome addressing)

RS-232

Use this menu to setup the RS-232 parameters of the RS-232 connector on the rear panel.

Figure 53. The System/Serial Communication/RS-232

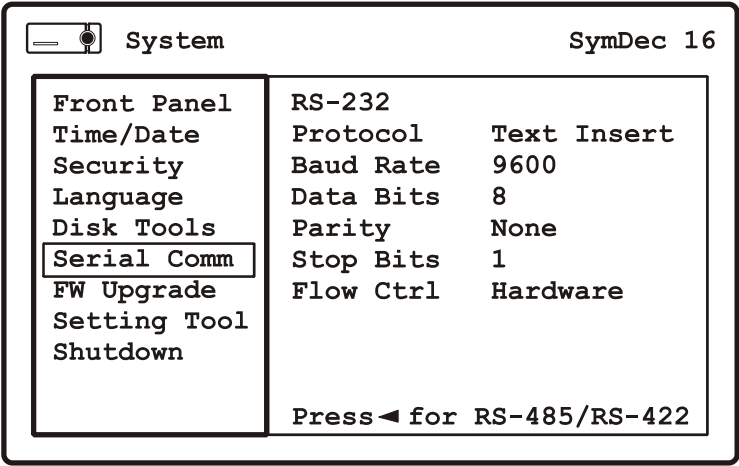


Table 38. The System/Serial Communication/RS-232 options

Menu Options	Settings
Protocol	Text Insertion or Serial Passthrough
Baud Rate	300, 1200, 2400, 4800, 9600, 14400, 19200, 28800, 57600, 115200
Data Bits	5, 6, 7, 8
Parity	None, Even, Odd
Stop Bits	1 or 2
Flow Control	None, Xon, Xoff

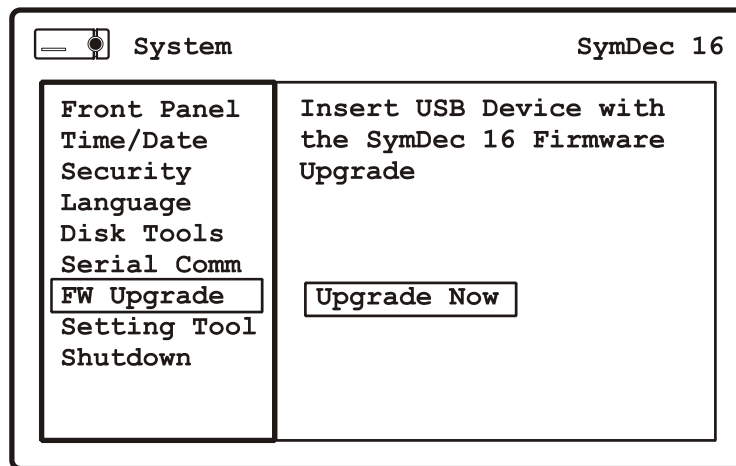
Firmware Upgrade

Use this menu to upgrade the firmware (from a USB flashdrive) of the SymDec 16 plus 4. To upgrade do the following:

1. Insert a USB flashdrive, with the flash upgrade file, into one of the USB ports.
2. Navigate to the *Upgrade Now* command and press the enter button.
3. The SymDec will reboot when completed.

Note: The flash upgrade file must be in the root directory of the flashdrive. Do not remove power while an upgrade is in-process.

Figure 54. The System/Firmware Upgrade menu



Setting Tool

Use this menu to restore factory setting, load and save settings to a USB flashdrive.

Figure 55. The System/Setting Tool

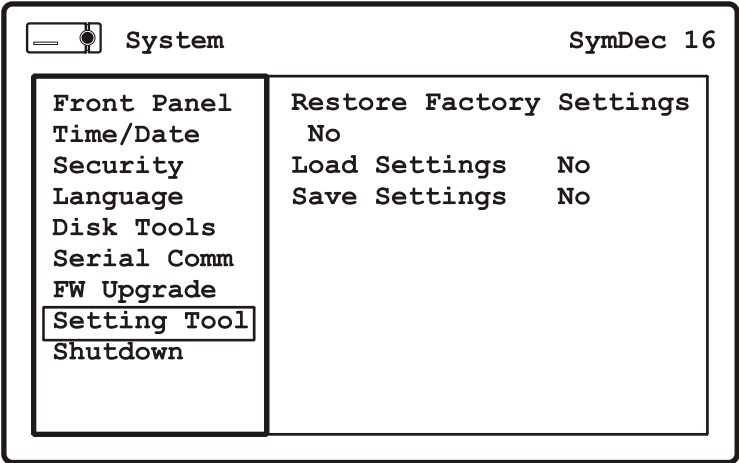


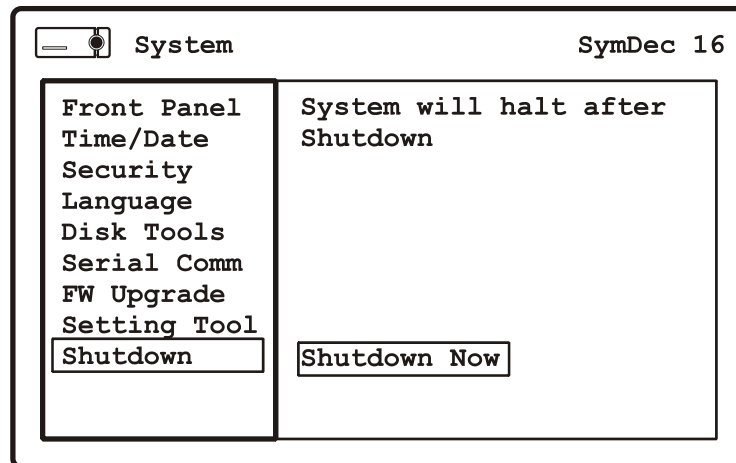
Table 39. The System/Setting Tool option

Menu Options	Settings
Restore Factory Settings	Select Yes to restore
Load Settings	Select Yes to load settings from a USB Flashdrive
Save Settings	Select Yes to save settings to a USB Flashdrive

Shutdown

Use this menu to shutdown the SymDec 16 plus 4 safely. Navigate to the *Shutdown Now* command and press the enter button.

Figure 56. The System/Shutdown menu



The Info menu

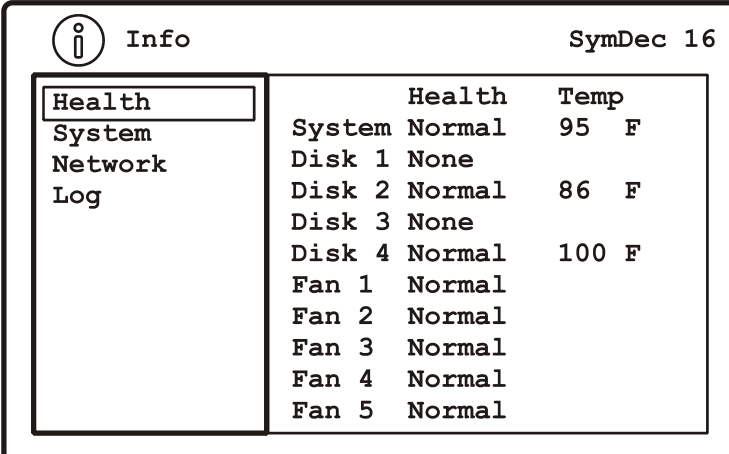
Highlight the *Info* icon and press the *enter* button. The *Info* menu will appear. The Info menu contains the following options and their settings:

Health

The Health menu display information on the following:

- System
- Disk 1 -4
- Fans 1-5

Figure 57. The Info/Health menu



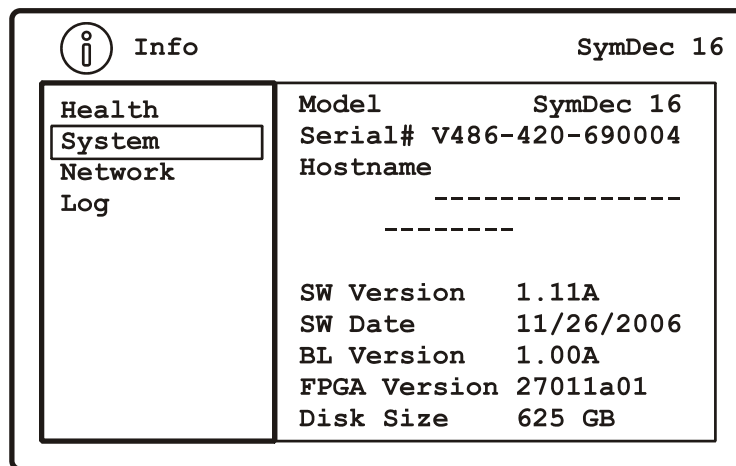
Info		SymDec 16	
Health	Health	Temp	
System	System	Normal	95 F
Network	Disk 1	None	
Log	Disk 2	Normal	86 F
	Disk 3	None	
	Disk 4	Normal	100 F
	Fan 1	Normal	
	Fan 2	Normal	
	Fan 3	Normal	
	Fan 4	Normal	
	Fan 5	Normal	

System

The System menu display information on the following:

- Model
- Serial Number
- Hostname
- Software Version
- Software Date
- BL Version
- FPGA Version
- Disk Size

Figure 58. The Info/System menu



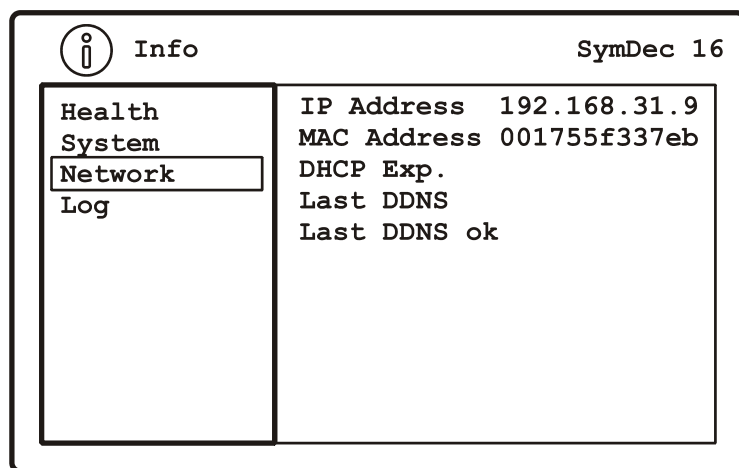
Info		SymDec 16
Health	Model	SymDec 16
System	Serial#	V486-420-690004
Network	Hostname	-----
Log		-----
	SW Version	1.11A
	SW Date	11/26/2006
	BL Version	1.00A
	FPGA Version	27011a01
	Disk Size	625 GB

Network

The Network menu display information on the following:

- IP Address
- MAC Address
- DHCP Lease Expires
- Last DDNS Update Status
- Last DNS Update Success

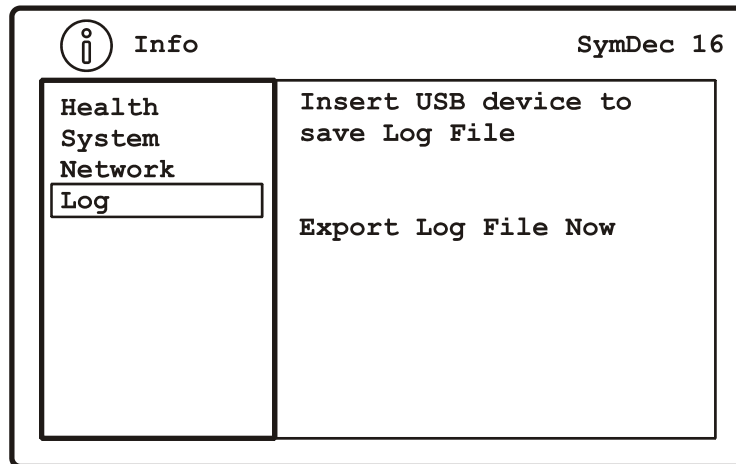
Figure 59. The Info/Network menu



Log

The log menu allows you to save the Log file to a USB device.

Figure 60. The Info/Network menu



The log file provides information on unit status, unit information, and hard drive temperatures. An example log file is shown below.

```
SymDec16 Log
Serial Number: V406-206-6N0010
Mac Address: 001755f33906
12/21/2006 11:06:53 Network Link Down
12/21/2006 11:06:53 System Start
12/29/2006 04:43:59 Network Link Down
12/29/2006 04:43:59 System Start
01/05/2007 04:56:59 Network Link Down
01/05/2007 04:56:59 System Start
01/05/2007 05:05:08 Network Link Down
01/05/2007 05:05:08 System Start
01/10/2007 03:03:51 Network Link Down
01/10/2007 03:03:51 System Start
01/10/2007 03:45:06 Network Link Up
09/23/2006 00:01:31 Network Link Down
09/23/2006 00:01:31 System Start
09/23/2006 00:02:26 Network Link Up
09/23/2006 00:07:56 Network Link Down
09/23/2006 01:52:27 Network Link Up
```


Chapter 5 SymNav and SymBrowser

This chapter provides detailed information on

- how to install the *SymNav* video software; and
- how to access and use the embedded *SymBrowser*.

In this chapter:

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<i>Installing SymNav software from CD-ROM</i>	86
<i>Starting SymNav software</i>	86
<i>The SymBrowser Webserver</i>	88
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<i>User</i>	90
<i>Configure options</i>	91
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SymNav

SymNav software provides remote video viewing and SymDec 16 menu setup with your PC. Make sure all connections are completed, at a minimum the power cord, a viewing monitor, and an Ethernet cable must be connected from the SYmDec 16 plus 4 and your PC.

Minimum System Requirements

The following minimum system requirements must be met before software installation.

Windows® 2000/XP and Direct X are registered trademarks of Microsoft Corporation.

Table 40.

Hardware	Specification
CPU	Pentium 2.8 GHz or faster
RAM	512 MB
Hard disk drive	50 MB free hard drive space
Monitor	SVGA, 1024 X 768, 24 bit color
Video	AGP or PCI Express, 128 MB DDR Memory Direct X Version 9 or higher
Operating system	Windows® 2000 SP4, XP SP2

Installing SymNav software from CD-ROM

To install software on your hard disk from a CD:

1. Place the SymNav software CD in the CD-ROM drive of a PC that meets the minimum system requirements.
2. Follow the instructions for installation as they appear.
- 3.

Note: If Autorun is not enabled on your PC, choose Run from the Start Menu, then type d:\setup.exe (where "d" is the drive letter of your CD-ROM) and click OK. Follow the instructions as they appear on your screen.

Starting SymNav software


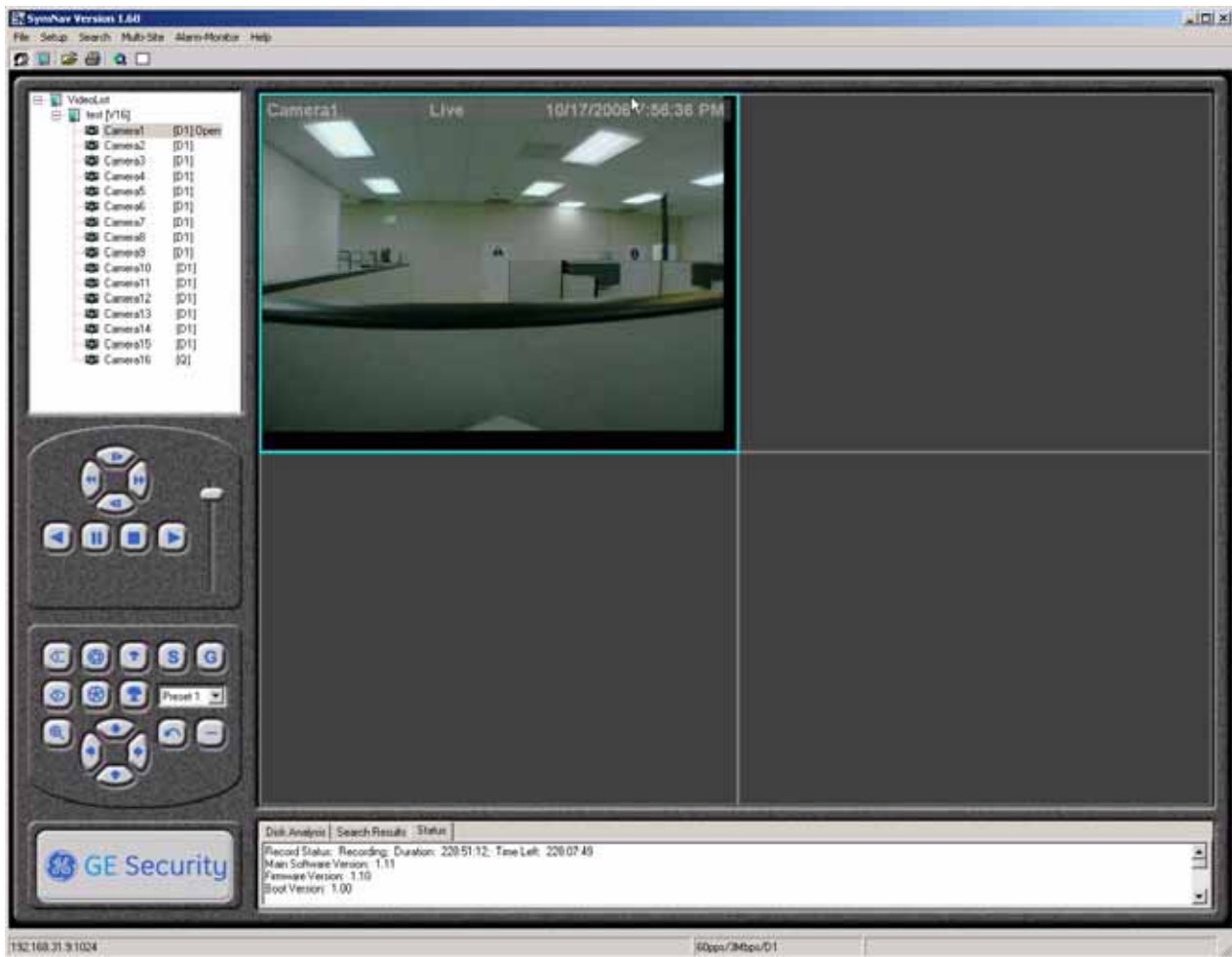
To start the SymNav software, double-click on the SymNav software desktop icon  or choose *Programs* from the *Start menu* and then select *SymNav software*. The Main window of the SymNav software program will appear. For operating details, please see the SymNav software manual.

Figure 61. The SymNav main operation screen



The SymBrowser Webserver

The SymDec 16 plus 4 has an integrated WebServer interface. The WebServer provides you the means to remotely configure, upgrade, and view information about the SymDec 16 plus 4. The default IP address from the factory is 192.168.1.82.

To access the web interface:

1. Launch Internet Explorer (version 5.5 or later) on any local Internet connected PC or laptop.
2. Type in the unit's IP address (*192.168.1.82*) or *hostname* (see network settings page) in the address field and click enter.
Note: When launching, SymBrowser checks your system for the correct files. If they are not detected, SymBrowser will attempt to load them. Accept all General Electric signed content to allow the files to be loaded.
3. The *Enter Network Password* screen will appear. Enter your user name and password (PIN).
4. The SymDec 16's SymBrowser home page window should appear.

Figure 62. SymDec 16 plus 4 SymBrowser home page



On this page you will find links for *SymBrowser*, *Search*, *User's*, *Configure*, and *Info*.

Note: The SymBrowser is discussed in detail at the end of this chapter.

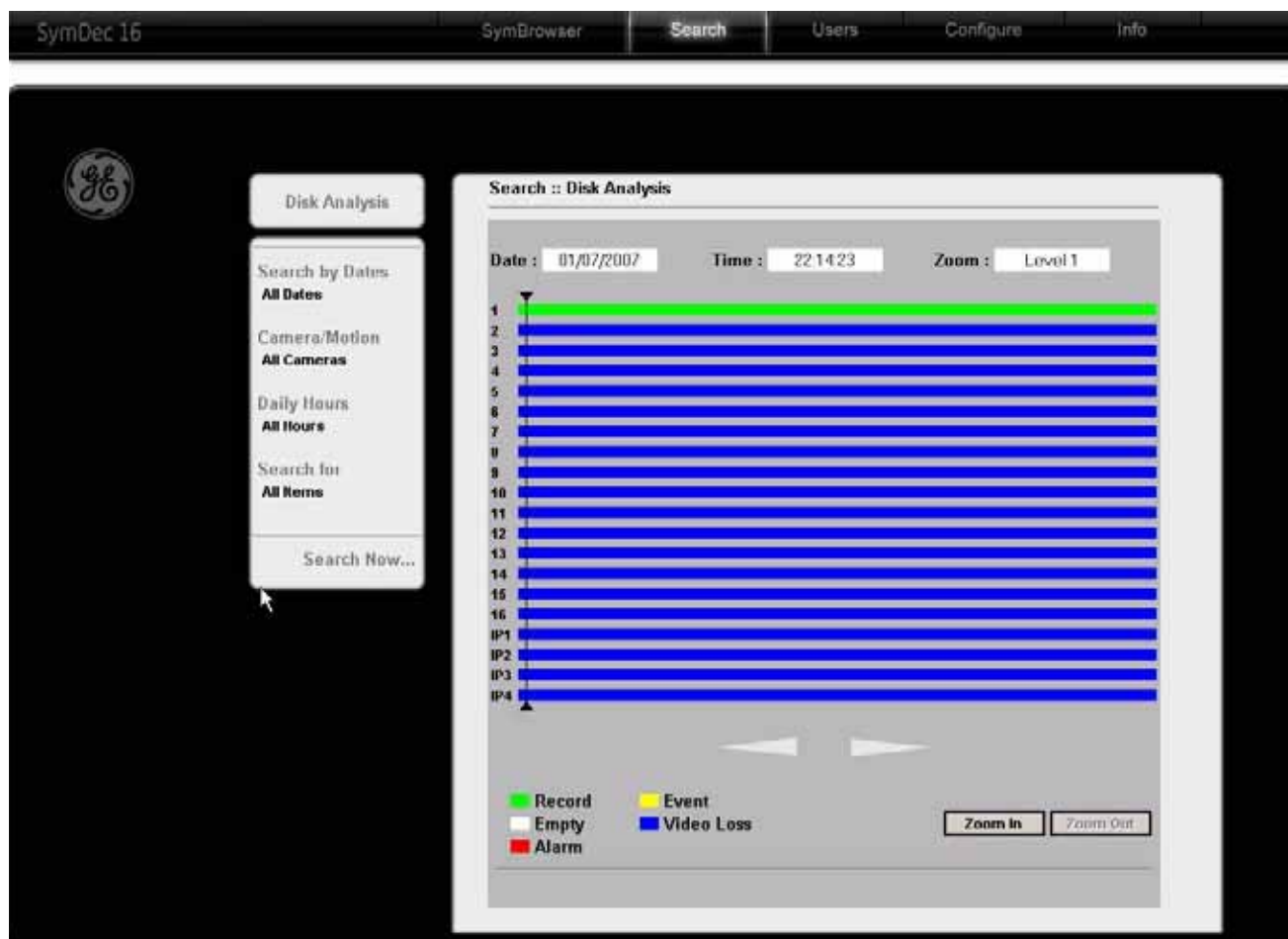
Search

Clicking on the *Search* link will display the following user options:

- Disk Analysis screen
- Search by Dates
- Camera Motion
- Daily Hours selection
- Search for Alarms, Event and Text options

See [Searching](#) on page 124 for more detailed information on how to use these features.

Figure 63. The Search/Disk Analysis screen



User

Clicking on the *User* link will display the following user options:

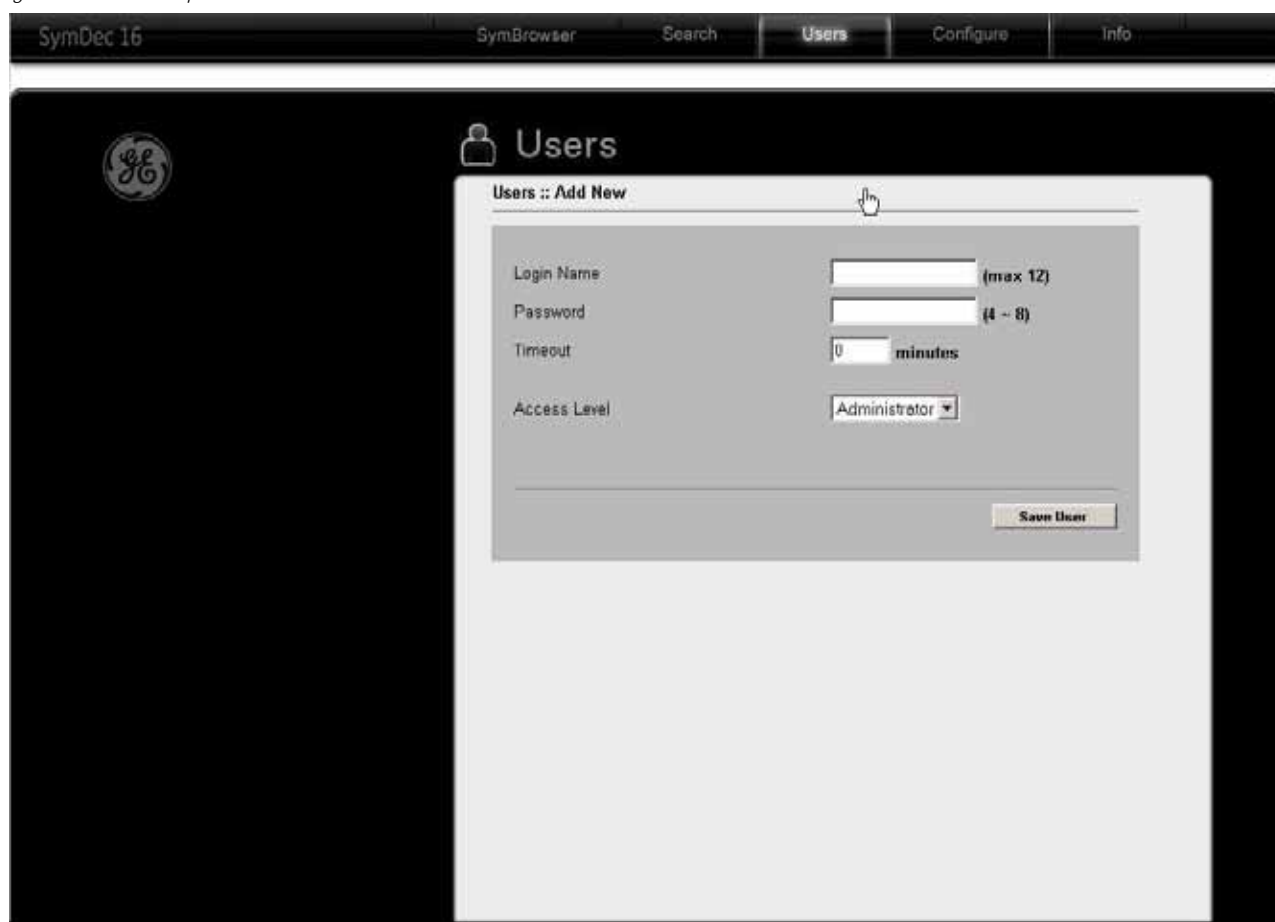
- Add User
- Edit User

Add User

Click on the *Add User* link to display the *Add New* page. On this page you can:

- Enter a login name;
- Create a password;
- Enter a timeout in minutes; and
- Set the user's access levels.

Figure 64. Add new options



The screenshot shows the SymDec 16 web interface. The top navigation bar includes 'SymDec 16', 'SymBrowser', 'Search', 'Users' (highlighted), 'Configure', and 'Info'. The main content area features the GE logo and a 'Users' header with a user icon. Below this is a form titled 'Users :: Add New'. The form contains the following fields: 'Login Name' (text input, max 12), 'Password' (text input, 4 - 8), 'Timeout' (text input with 'minutes' label, value 0), and 'Access Level' (dropdown menu set to 'Administrator'). A 'Save User' button is located at the bottom right of the form.

Note: Up to 24 users can be logged on at the same time.

Edit User

Click on the *Edit User* link to display the *Edit New* page. On this page you can:

- Edit a user's login name;
- Change a user's password;
- Change the user's timeout in minutes;
- Modify the user's access levels;
- Delete or Save the user.

Figure 65. The Edit User page

The screenshot shows the 'Edit User' interface in SymNav. The top navigation bar includes 'SymDec 16', 'SymBrowser', 'Search', 'Users', 'Configure', and 'Info'. Below this, there are links for 'Add User' and 'Edit User'. The main area is titled 'Users' and displays a list of users on the left: 'user 1' (green icon), 'user 2' (yellow icon), and 'user 3' (red icon). The right panel, titled 'Users :: Edit :: user 1', contains a form for editing user details. The form fields are: 'Login Name' (text box with 'user 1', max 12), 'Password' (password box with masked characters, 4 ~ 8), 'Timeout' (text box with '0', followed by 'minutes'), and 'Access Level' (dropdown menu showing 'Administrator'). At the bottom of the form are two buttons: 'Delete User' and 'Save User'.

Configure options

Clicking on the *Configure* link will display the following options:

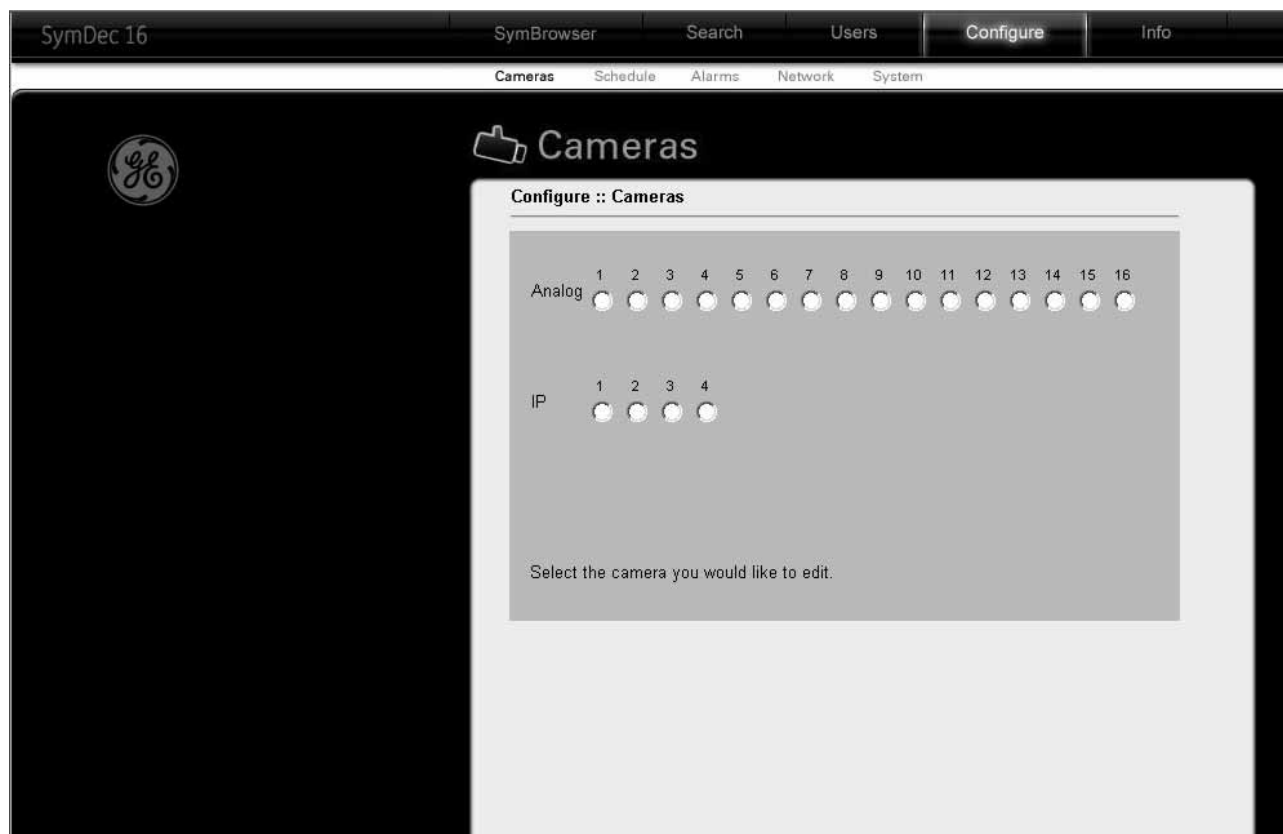
- Cameras
- Schedule
- Alarms
- Network
- System

Cameras

Click on the *Cameras* link to display the *Configure Cameras* page. Clicking on the camera that you want to configure launches the camera edit options:

- Recording
- Rates Duration
- Alarm Input
- Motion Detection
- Camera Title
- Adjust Video
- Copy Setting

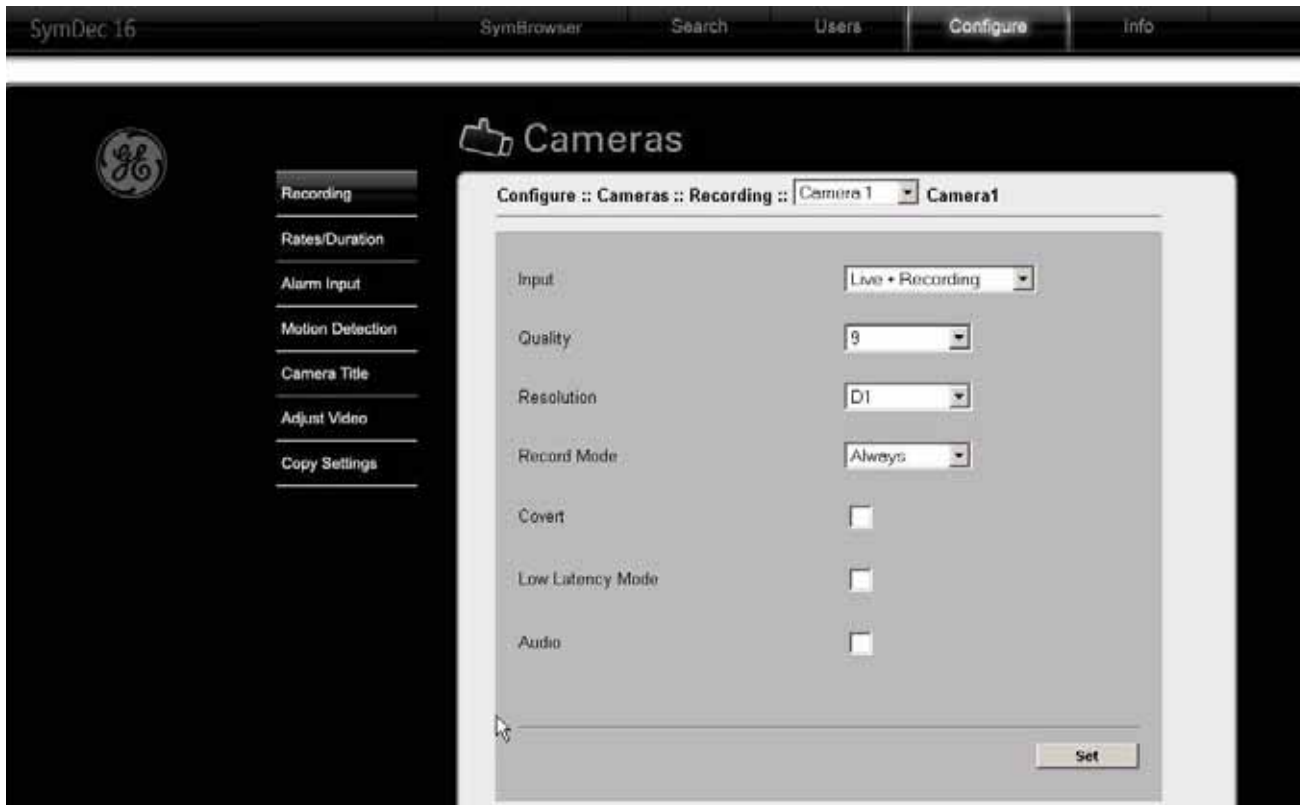
Figure 66. Configure Camera page



Recording

See the [Recording Menu](#) on page 34 for more detailed information on the features.

Figure 67. Cameras edit/recording page



The screenshot displays the SymNav interface for configuring camera recording settings. The top navigation bar includes 'SymDec 16', 'SymBrowser', 'Search', 'Users', 'Configure', and 'Info'. The main content area is titled 'Cameras' and features a left-hand menu with options: 'Recording' (selected), 'Rates/Duration', 'Alarm Input', 'Motion Detection', 'Camera Title', 'Adjust Video', and 'Copy Settings'. The central configuration window, titled 'Configure :: Cameras :: Recording :: Camera 1', contains the following settings:

Setting	Value
Input	Live + Recording
Quality	9
Resolution	D1
Record Mode	Always
Covert	<input type="checkbox"/>
Low Latency Mode	<input type="checkbox"/>
Audio	<input type="checkbox"/>

A 'Set' button is located at the bottom right of the configuration window.

Rates/Duration

See [Duration Rates](#) on page 35 or more detailed information on the features.

Figure 68. Camera edit/Rates Duration page

The screenshot displays the SymDec 16 web interface. At the top, a navigation bar includes 'SymDec 16', 'SymBrowser', 'Search', 'Users', 'Configure', and 'Info'. The main content area is titled 'Cameras' and features a left-hand menu with options: 'Recording', 'Rates/Duration' (which is highlighted), 'Alarm Input', 'Motion Detection', 'Camera Title', 'Adjust Video', and 'Copy Settings'. The main panel is titled 'Configure :: Cameras :: Rates/Durations :: Camera 1' and contains the following settings:

Setting	Value
Timelapse Rate	30 fps
Event Rate	30 fps
Alarm Rate	30 fps
Pre-Event Duration	0 mins
Post-Event Duration	0 mins
Pre-Alarm Duration	1 mins
Post-Alarm Duration	0 mins

A 'Set' button is located at the bottom right of the configuration panel.

Alarm Input

See [Alarm Input](#) on page 36 for more detailed information on the features.

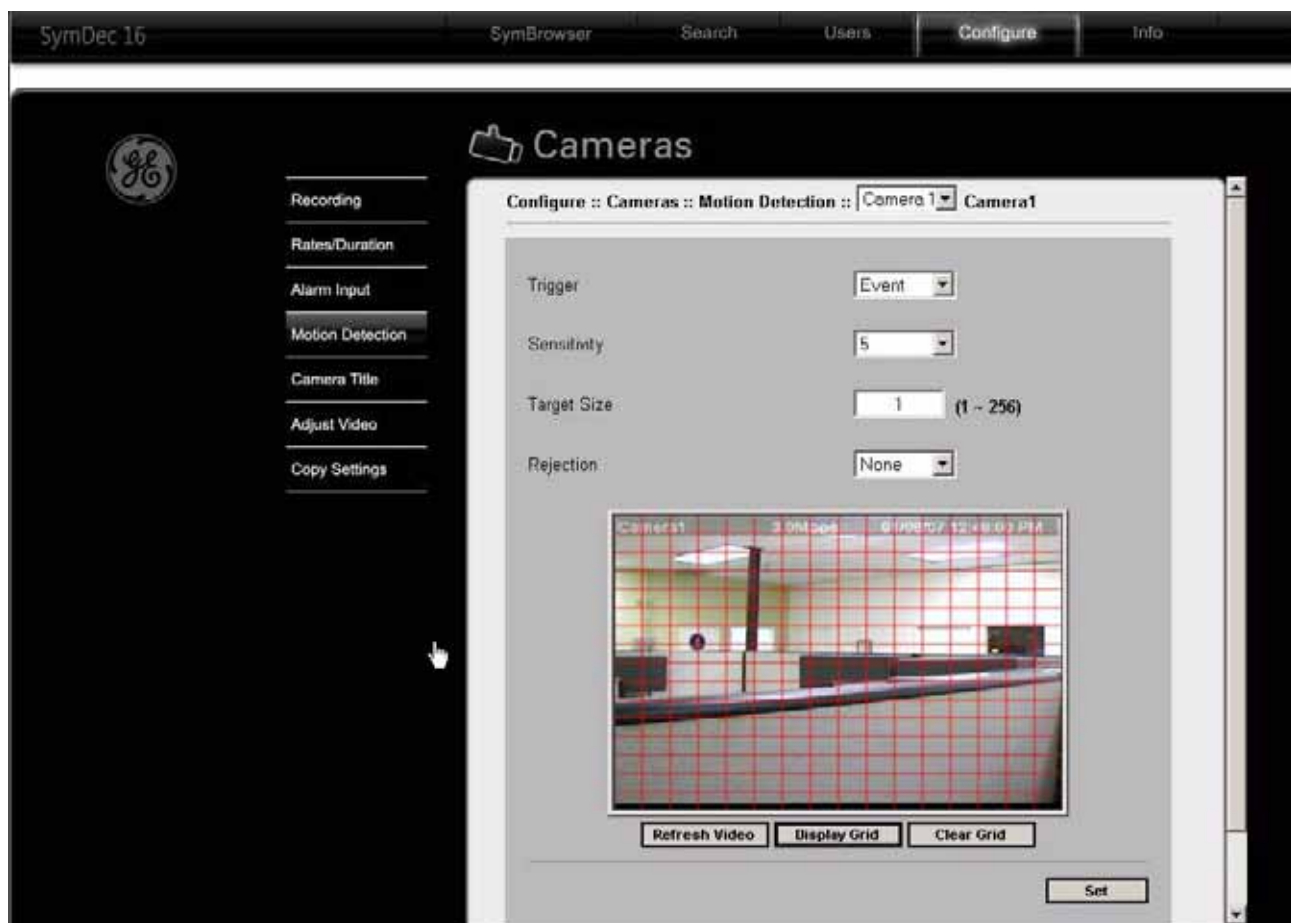
Figure 69. Camera edit/Alarm Input page



Motion Detection

See [Motion Detection](#) on page 37 for more detailed information on the features.

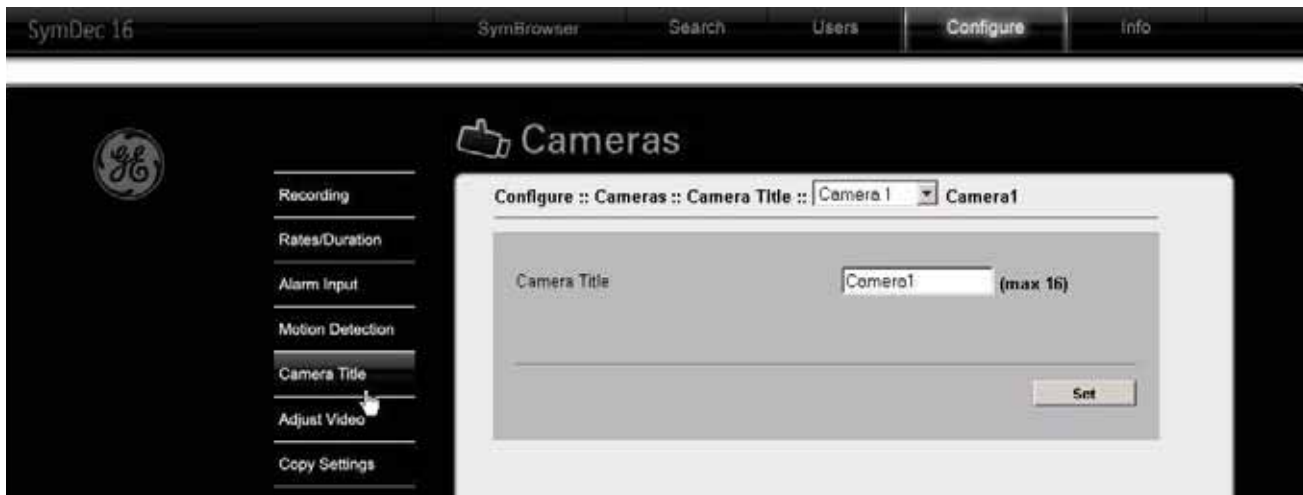
Figure 70. Camera edit/Motion Detection page



Camera Title

See [Camera Title](#) on page 38 for more detailed information on the features.

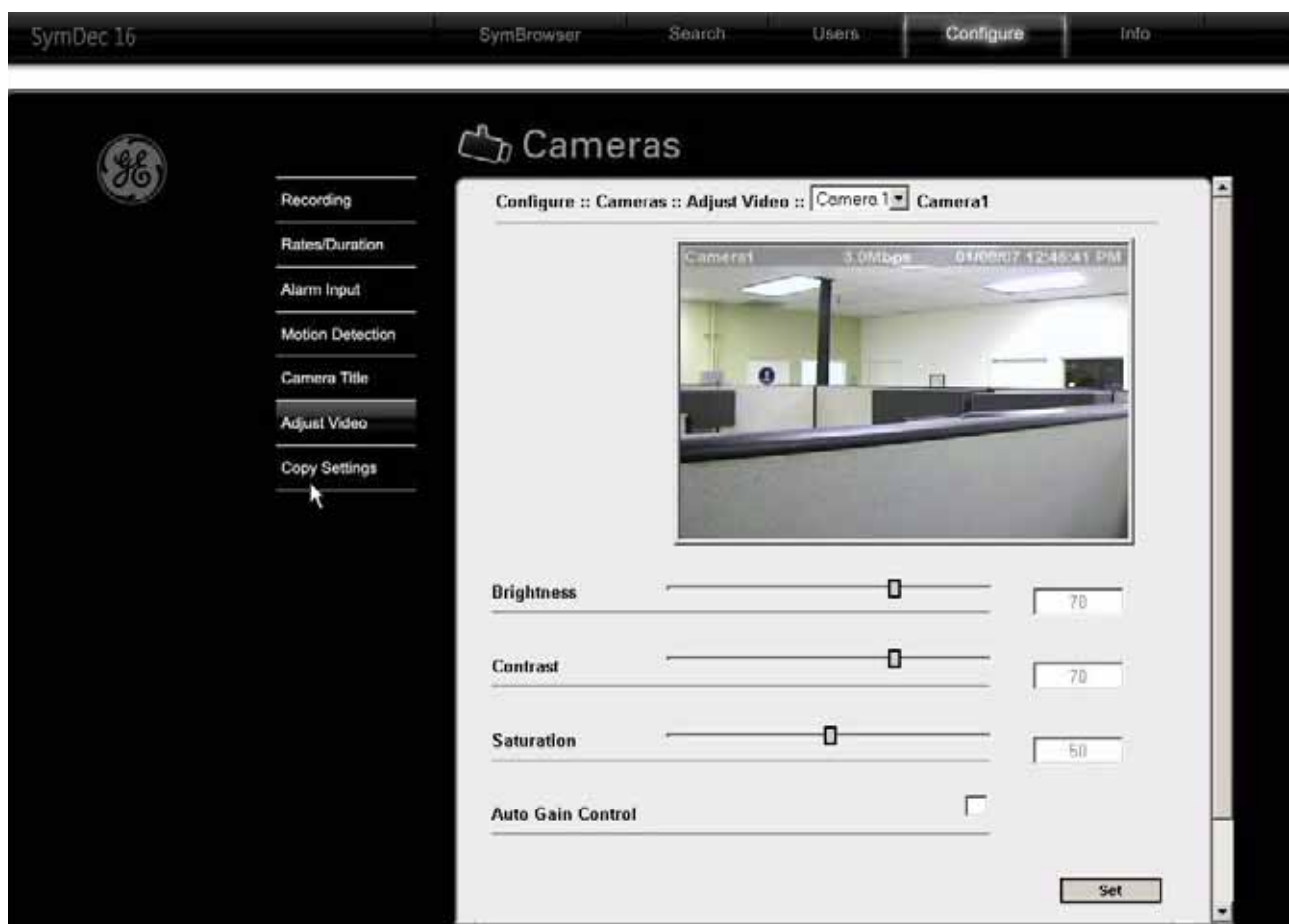
Figure 71. Camera edit/Camera Title page



Adjust Video

See [Adjust Video](#) on page 39 for more detailed information on the features.

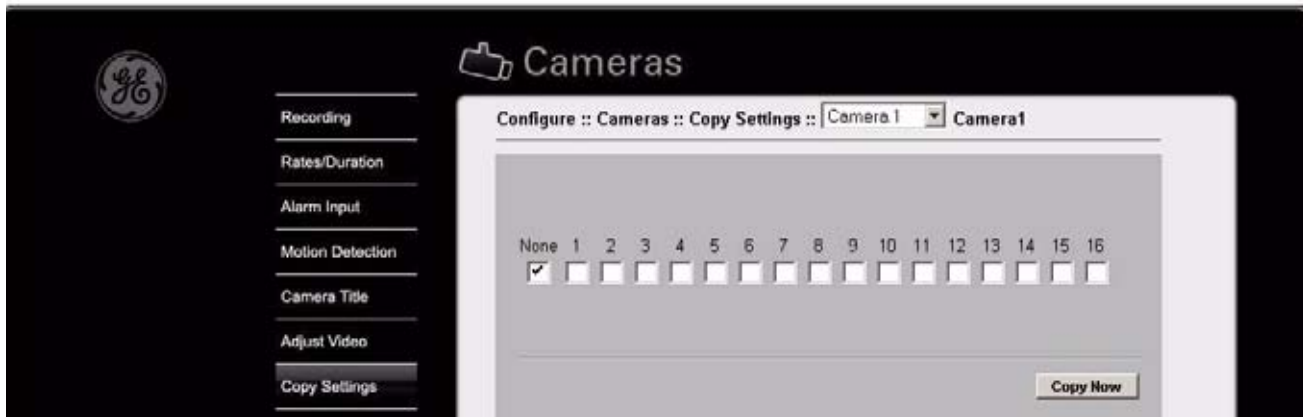
Figure 72. Camera edit/Adjust video page



Copy Settings

See [Copy Settings](#) on page 40 for more detailed information on the features.

Figure 73. Camera Edit/Copy settings page



Schedule

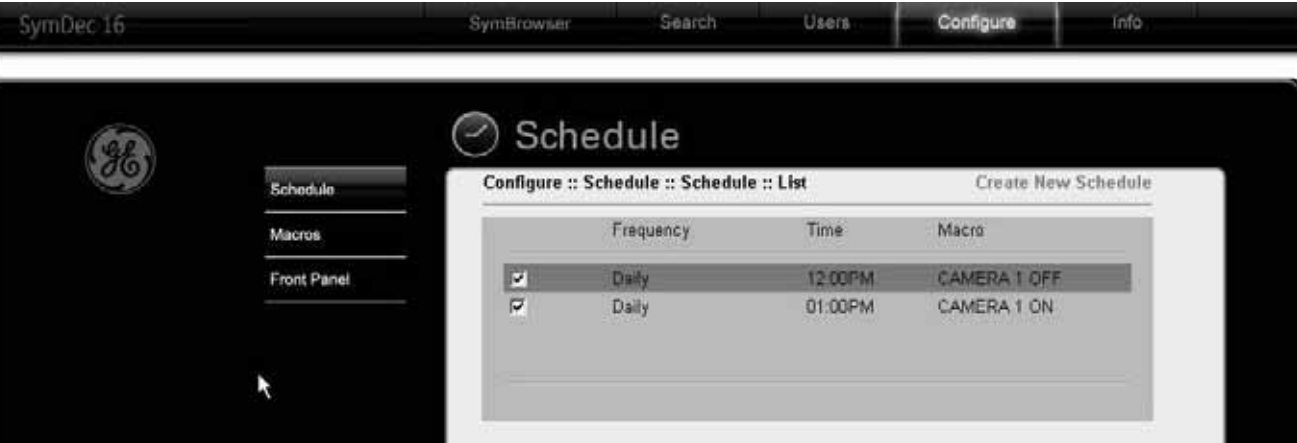
Click on the *Schedule* link to display the following scheduling options:

- Schedule
- Macros
- Front Panel

Schedule

See [New Schedule](#) on page 46 for more detailed information on the features.

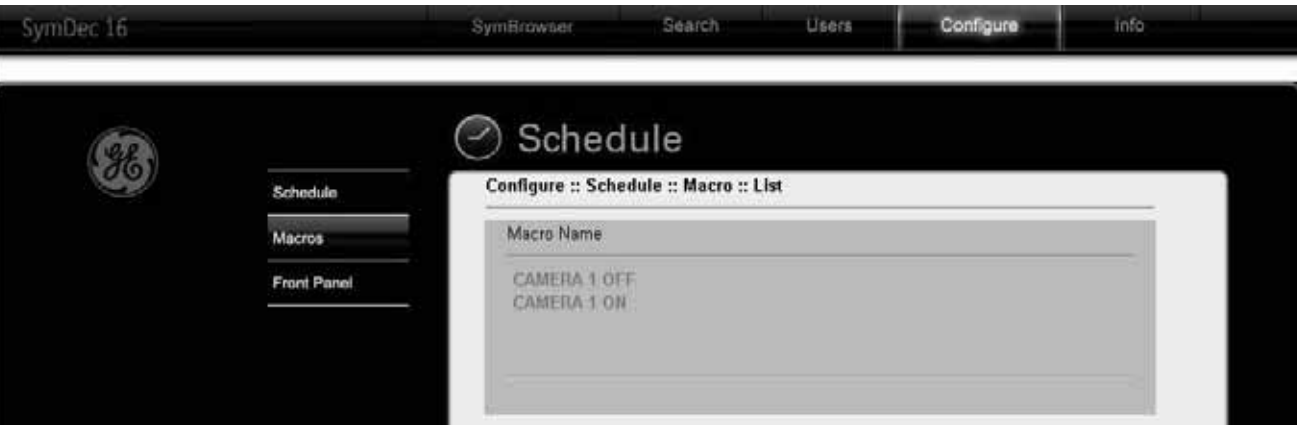
Figure 74. Schedule page



Macros

See [Macros](#) on page 47 for more detailed information on the features.

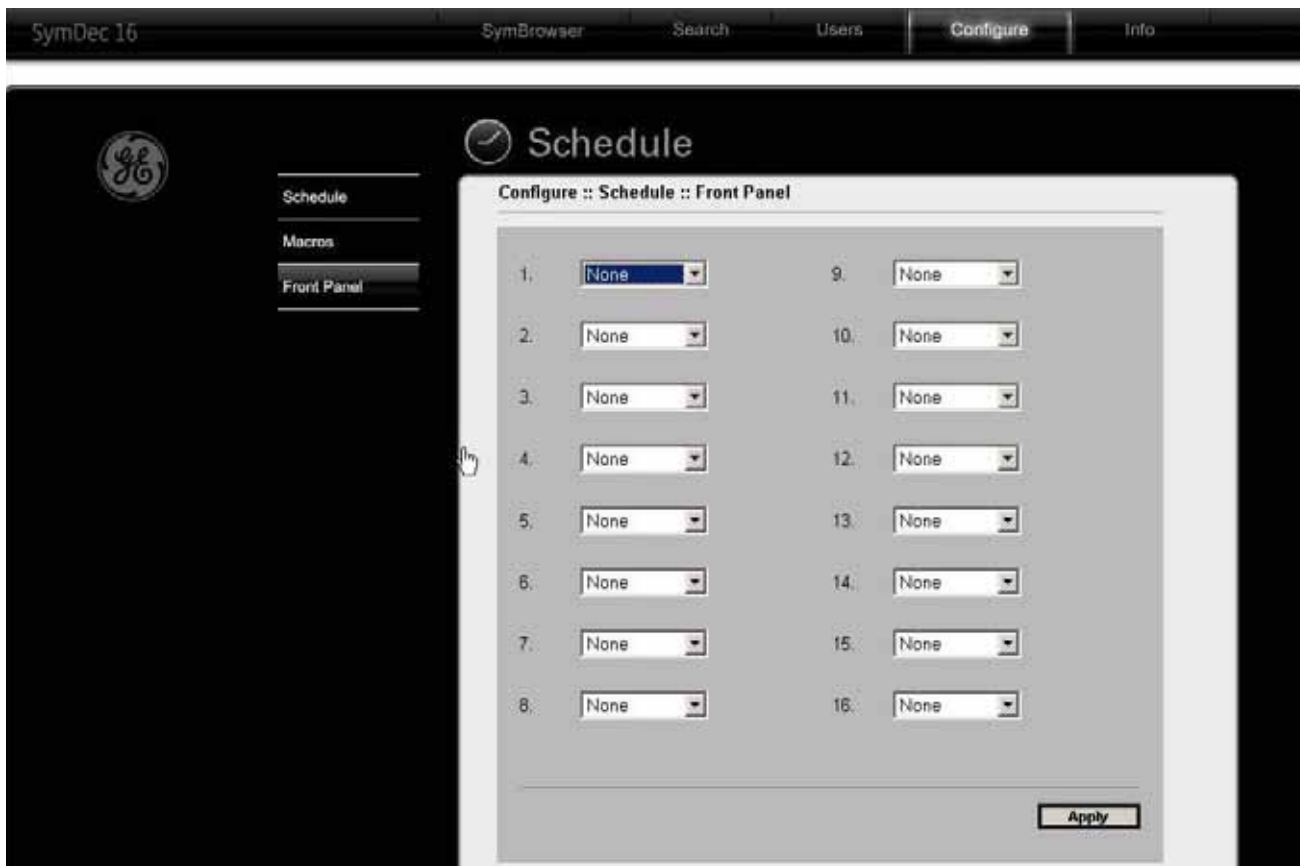
Figure 75. Macros page



Front Panel

See [Front Panel](#) on page 50 for more detailed information on the features.

Figure 76. Front panel page



Alarms

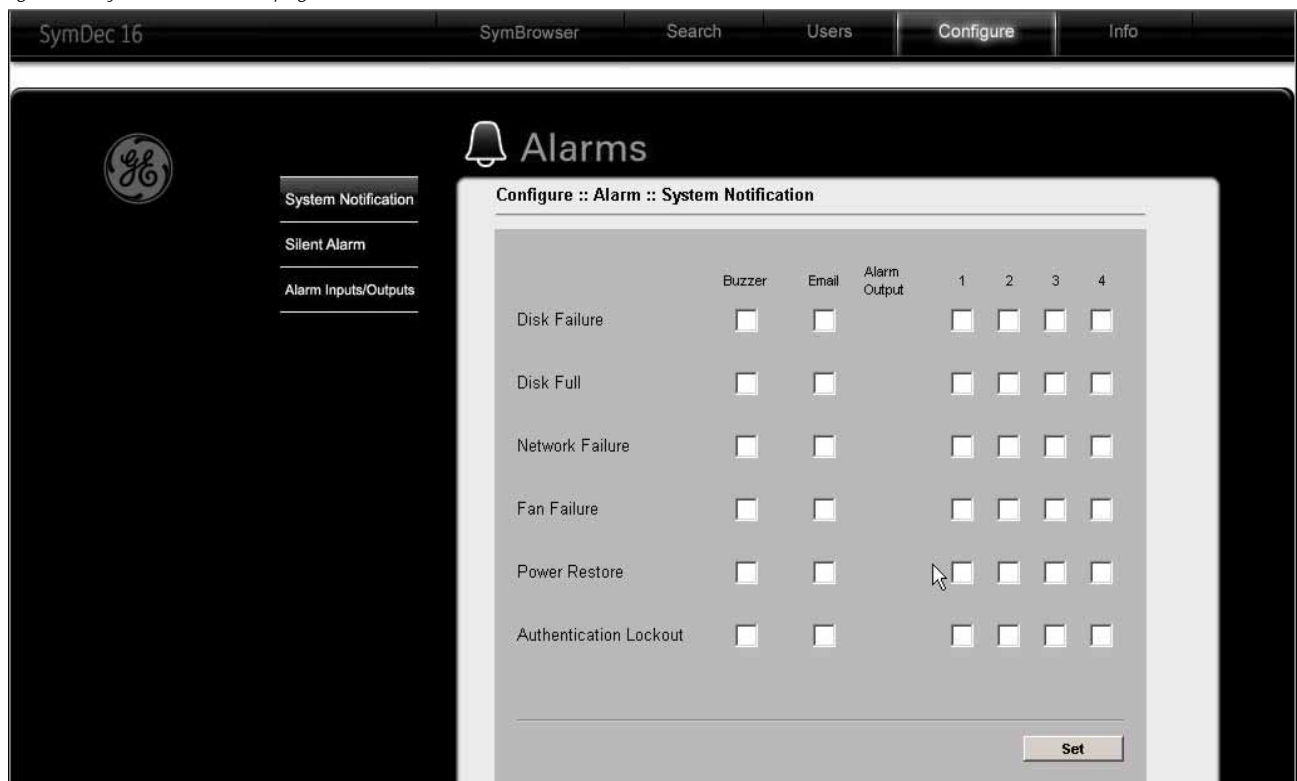
Click on the *Alarm* link to display the following alarm options:

- System Notification
- Silent Alarm
- Alarm Inputs/Outputs

System Notification

See *Notification* on page 52 for more detailed information on the features.

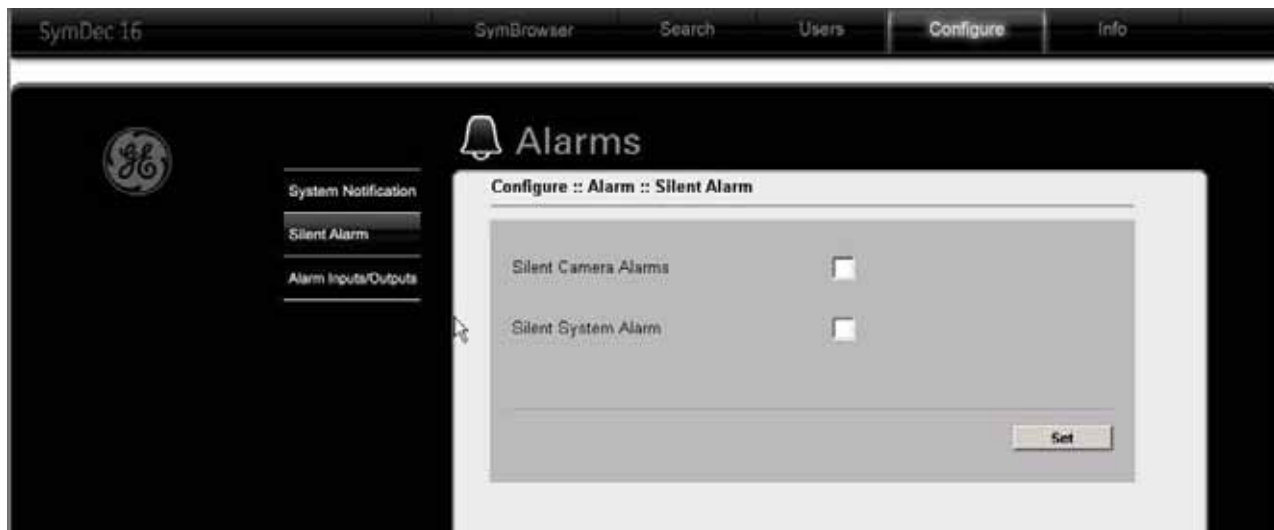
Figure 77. System Notification page



Silent Alarm

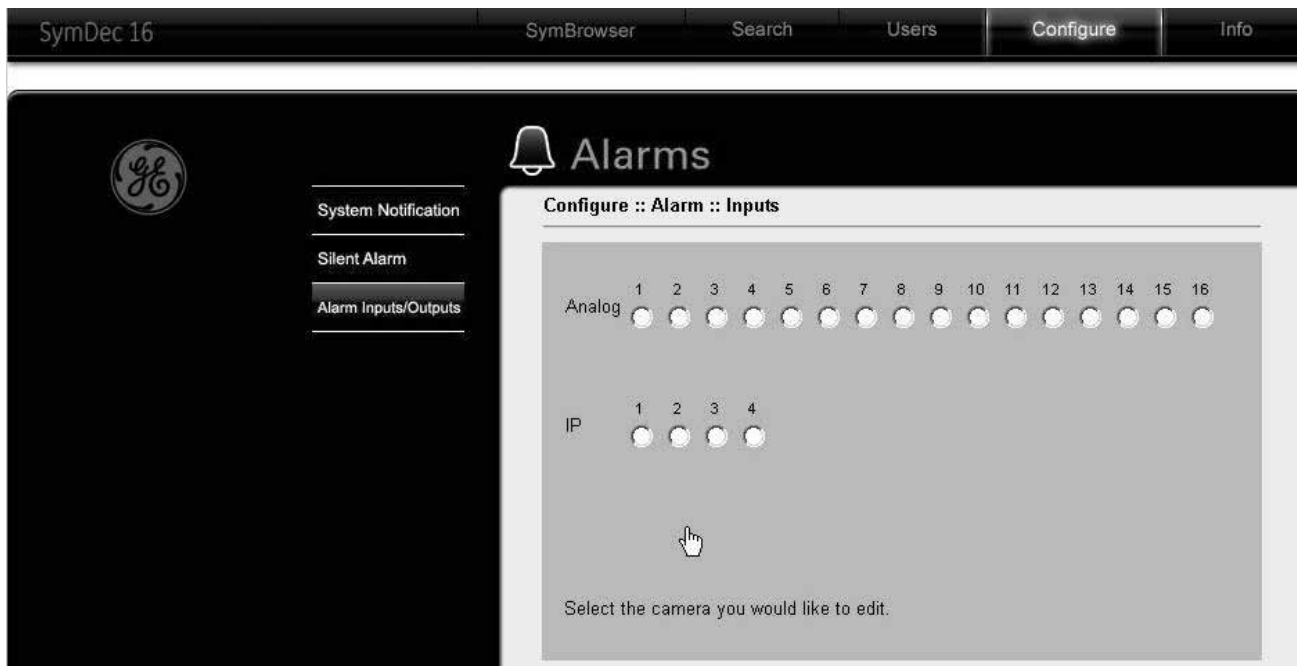
See on page 52 for more detailed information on the features.

Figure 78. Silent Alarm page



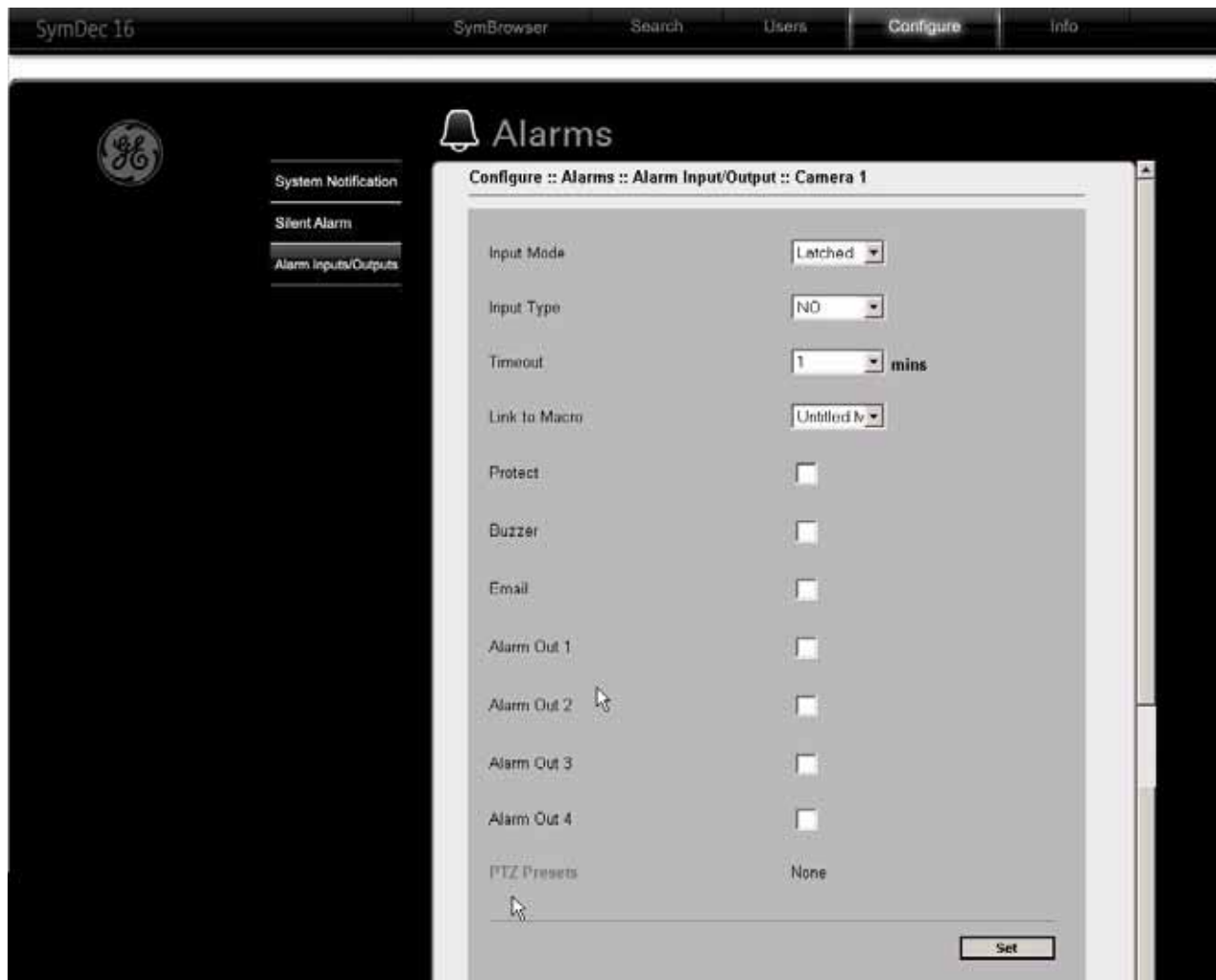
Alarm Inputs and Outputs

Figure 79. Alarm Inputs/Outputs page



Select a camera number to launch the *Alarm Input/Outputs* edit page. See [Alarm Inputs and Outputs](#) on page 53 for more detailed information on the features.

Figure 80. The Alarms Inputs/Outputs edit page



Network

Click on the *Network* link to display the following network options:

- IP Setting
- IP Advanced
- Services
- Streaming
- Serial Pass Through
- Network Notification
- Email Setup
- Notification Setup

IP Setting

See [IP Settings](#) on page 58 for more detailed information on the features.

Figure 81. IP Setting page

SymDec 16 SymBrowser Search Users Configure Info

Cameras Schedule Alarms Network System

GE

IP Settings
IP Advanced
Services
Streaming
Serial Passthrough
Network Notification
Email Setup
Notification Setup

Network

Configure :: Network :: IP Settings

Ethernet Static

IP Address 192.168.31.9

Subnet Mask 255.255.255.0

Gateway 192.168.1.1

Primary DNS 168.95.1.1

Secondary DNS 168.95.192.1

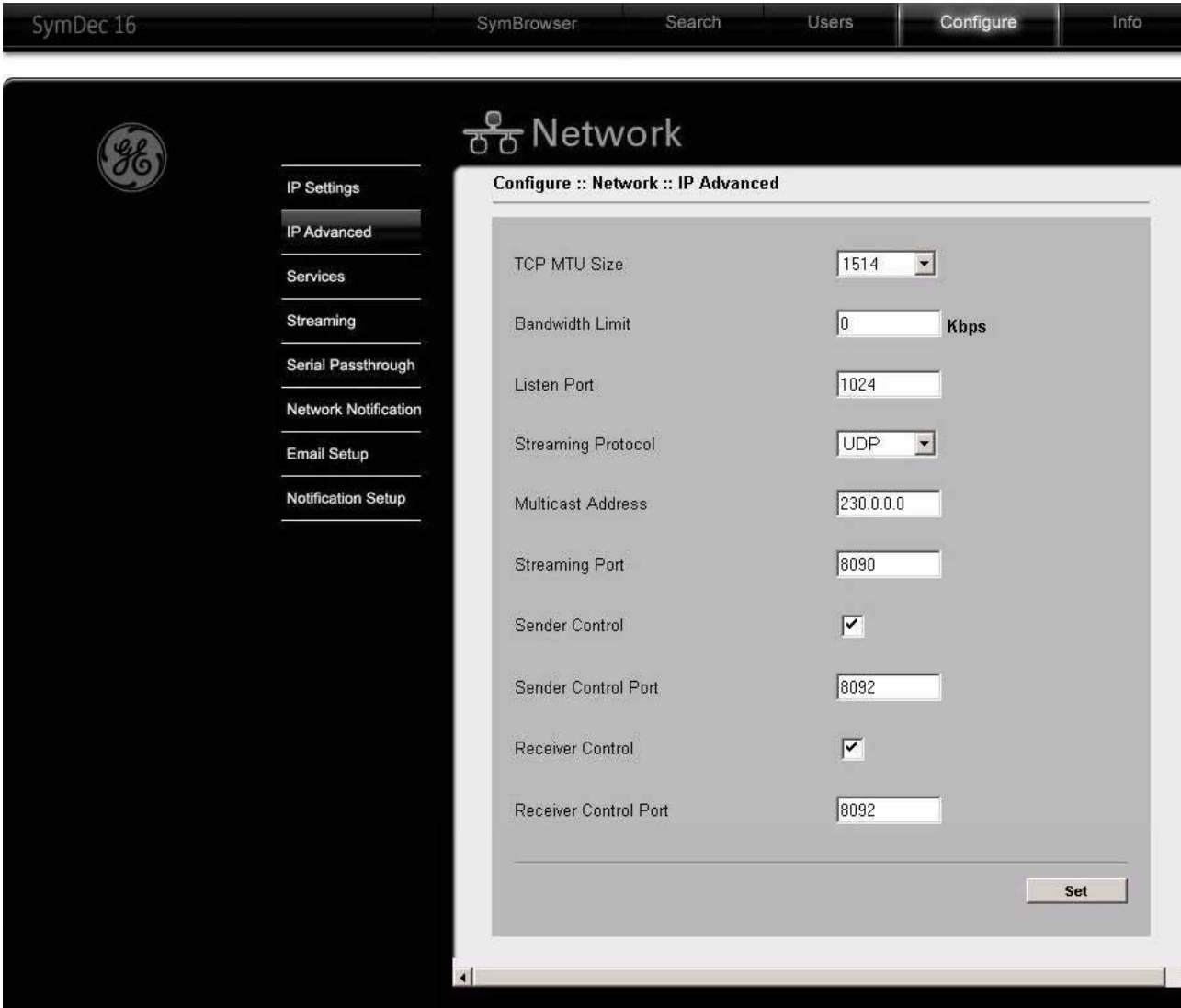
Ethernet Password jokik

Set

IP Advanced

See [IP Advanced](#) on page 59 for more detailed information on the features.

Figure 82. IP Advanced page



Services

See [Services](#) on page 61 for more detailed information on the features.

Figure 83. Services page

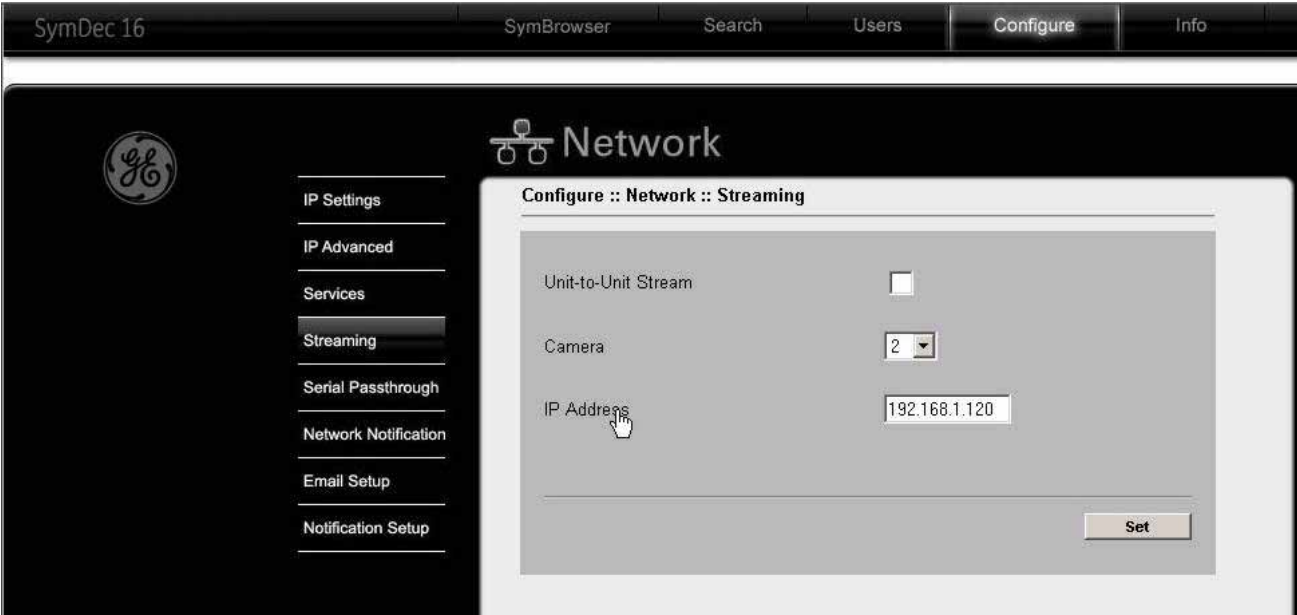
The screenshot shows the SymDec 16 web interface. At the top, a navigation bar includes 'SymDec 16', 'SymBrowser', 'Search', 'Users', 'Configure', and 'Info'. On the left, a sidebar menu lists 'IP Settings', 'IP Advanced', 'Services' (highlighted), 'Streaming', 'Serial Passthrough', 'Network Notification', 'Email Setup', and 'Notification Setup'. The main content area is titled 'Network' and contains a 'Configure :: Network :: Services' window. This window has the following fields: 'HTTP Port' (text box with '80'), 'NTP Primary Server' (text box with '220.130.158.52'), 'NTP Secondary Server' (text box with '216.52.237.153'), 'NTP Update Interval' (dropdown menu with 'Once per Day'), 'Name Service' (dropdown menu with 'Disabled'), and 'Host Name' (text box with 'GE Security'). A 'Set' button is located at the bottom right of the configuration window.

Configure :: Network :: Services	
HTTP Port	80
NTP Primary Server	220.130.158.52
NTP Secondary Server	216.52.237.153
NTP Update Interval	Once per Day
Name Service	Disabled
Host Name	GE Security
<div>Set</div>	

Streaming

See [Streaming](#) on page 62 for more detailed information on the features.

Figure 84. Streaming settings page



Serial Passthrough

See [Serial Passthrough](#) on page 63 for more detailed information on the features.

Figure 85. Serial pass through page

The screenshot shows the SymNav web interface. At the top is a navigation bar with tabs: SymDec 16, SymBrowser, Search, Users, Configure (selected), and Info. Below this is a dark header with the GE logo on the left and the word "Network" with a network icon on the right. A left sidebar contains a list of menu items: IP Settings, IP Advanced, Services, Streaming, Serial Passthrough (highlighted), Network Notification, Email Setup, and Notification Setup. The main content area is titled "Configure :: Network :: Serial Passthrough" and contains the following configuration fields:

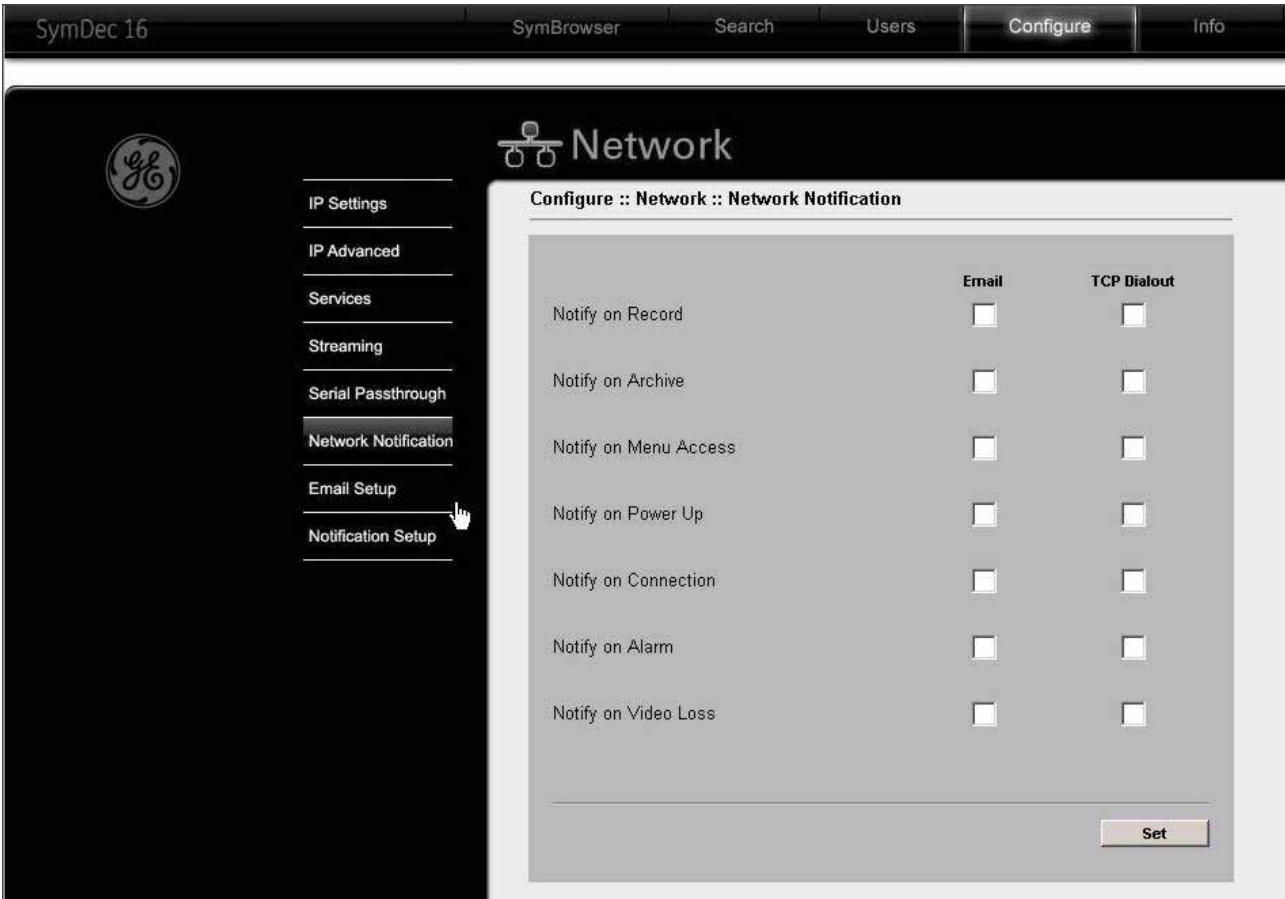
Mode	Receiver
Remote IP Address	192.168.1.120
Port	9000
Serial Port	RS-232
Auto Connect	<input checked="" type="checkbox"/>

A "Set" button is located at the bottom right of the configuration area.

Network Notification

See [Email/TCP Notification](#) on page 64 for more detailed information on the features.

Figure 86. Network notification page



Email Setup

See [Email Setup](#) on page 65 for more detailed information on the features.

Figure 87. Email setup page

The screenshot shows the SymNav web interface. At the top, a navigation bar includes 'SymDec 16', 'SymBrowser', 'Search', 'Users', 'Configure', and 'Info'. The main content area has a dark sidebar on the left with the GE logo and a menu of settings: 'IP Settings', 'IP Advanced', 'Services', 'Streaming', 'Serial Passthrough', 'Network Notification', 'Email Setup' (highlighted), and 'Notification Setup'. The main panel is titled 'Network' with a network icon. A modal window titled 'Configure :: Network :: Email Setup' is open, displaying the following configuration options:

Email Address #1	<input type="text"/>
Email Address #2	<input type="text"/>
Email Address #3	<input type="text"/>
SMTP Server	<input type="text"/>
SMTP Port	<input type="text" value="25"/>
SMTP Authentication	<input type="checkbox"/>
SMTP Username	<input type="text"/>
SMTP Password	<input type="text"/>
SMTP SSL Enable	<input type="checkbox"/>

A 'Set' button is located at the bottom right of the modal window.

Notification Setup

See [Notification Setup](#) on page 66 for more detailed information on the features.

Figure 88. Notification setup

The screenshot displays the SymDec 16 web interface. At the top, a navigation bar includes links for SymDec 16, SymBrowser, Search, Users, Configure, and Info. The main content area features a GE logo on the left and a sidebar menu with options: IP Settings, IP Advanced, Services, Streaming, Serial Passthrough, Network Notification, Email Setup, and Notification Setup (which is highlighted). The main panel is titled 'Network' and contains a sub-section 'Configure :: Network :: Notification'. This section includes four configuration fields: 'Primary Alarm Server Address' (192.168.1.10), 'Backup Alarm Server Address' (192.168.1.11), 'Alarm Dialout Port' (1027, with a range of 1024 ~ 32767), and 'Alarm Dialout Minutes' (0, with a note '(0 = unlimited)'). A 'Set' button is located at the bottom right of the configuration area.

System

Click on the *System* link to display the following system options:

- Front Panel
- Time/Date
- Security
- Language
- Serial Communication

Front Panel

See [Front Panel](#) on page 68 for more detailed information on the features.

Figure 89. Front panel page

The screenshot displays the SymDec 16 SymBrowser interface. At the top, a navigation bar includes 'SymDec 16', 'SymBrowser', 'Search', 'Users', 'Configure', and 'Info'. The 'Configure' tab is active. On the left, a sidebar menu lists 'Front Panel', 'Time/Date', 'Security', 'Language', and 'Serial Communications'. The 'Front Panel' option is selected. The main content area is titled 'System' and 'Configure :: System :: Front Panel'. It contains the following configuration items:

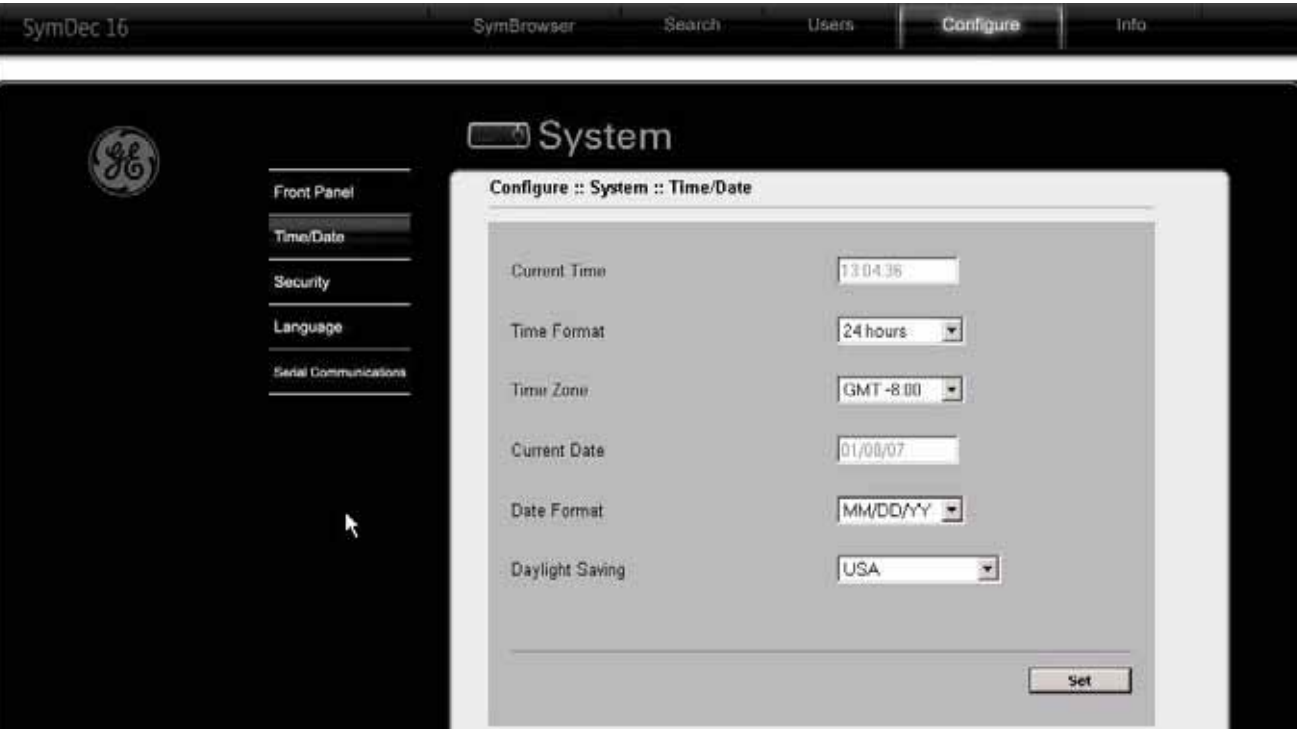
Configuration Item	Value	Unit
Sequencing Dwell A	3	sec
Sequencing Dwell B	3	sec
Instant Replay	5	sec
Panel Key Tone	<input checked="" type="checkbox"/>	
Panel Lighting Timeout	10	min
All Lights Off	<input type="checkbox"/>	

A 'Set' button is located at the bottom right of the configuration area.

Time/Date

See [Time/Date](#) on page 69 for more detailed information on the features.

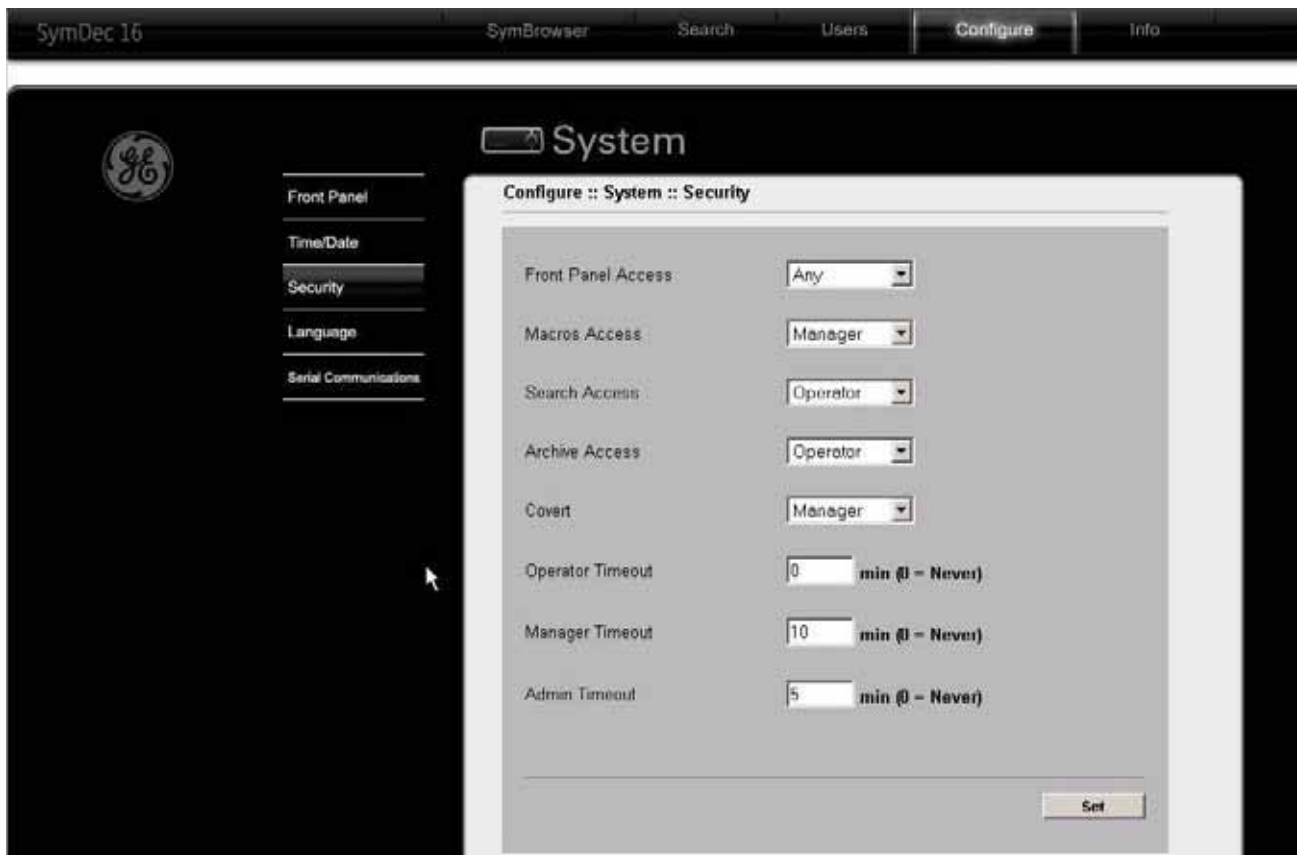
Figure 90. Time/Date page



Security

See [Security](#) on page 71 for more detailed information on the features.

Figure 91. Security page



Language

See [Languages](#) on page 72 for more detailed information on the features.

Figure 92. Language page



Serial Communication

See [Serial Communications](#) on page 75 for more detailed information on the features.

Figure 93. Shutdown page

The screenshot shows the SymDec 16 SymBrowser interface. The top navigation bar includes 'SymDec 16', 'SymBrowser', 'Search', 'Users', 'Configure', and 'Info'. The left sidebar contains a GE logo and a menu with 'Front Panel', 'Time/Date', 'Security', 'Language', and 'Serial Communications'. The main content area is titled 'System' and displays the 'Configure :: System :: Serial Communications' window. This window contains the following settings:

Setting	Value
Bus 1 Type	RS-485
Protocol	Kolotek
Baud Rate	9600
Device Address	1
Bus 2 Type	RS-485
Protocol	Kolotek
Baud Rate	9600
Device Address	1
RS 232	
Protocol	Text Insertion
Baud Rate	9600
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	Hardware

A 'Set' button is located at the bottom right of the configuration window.

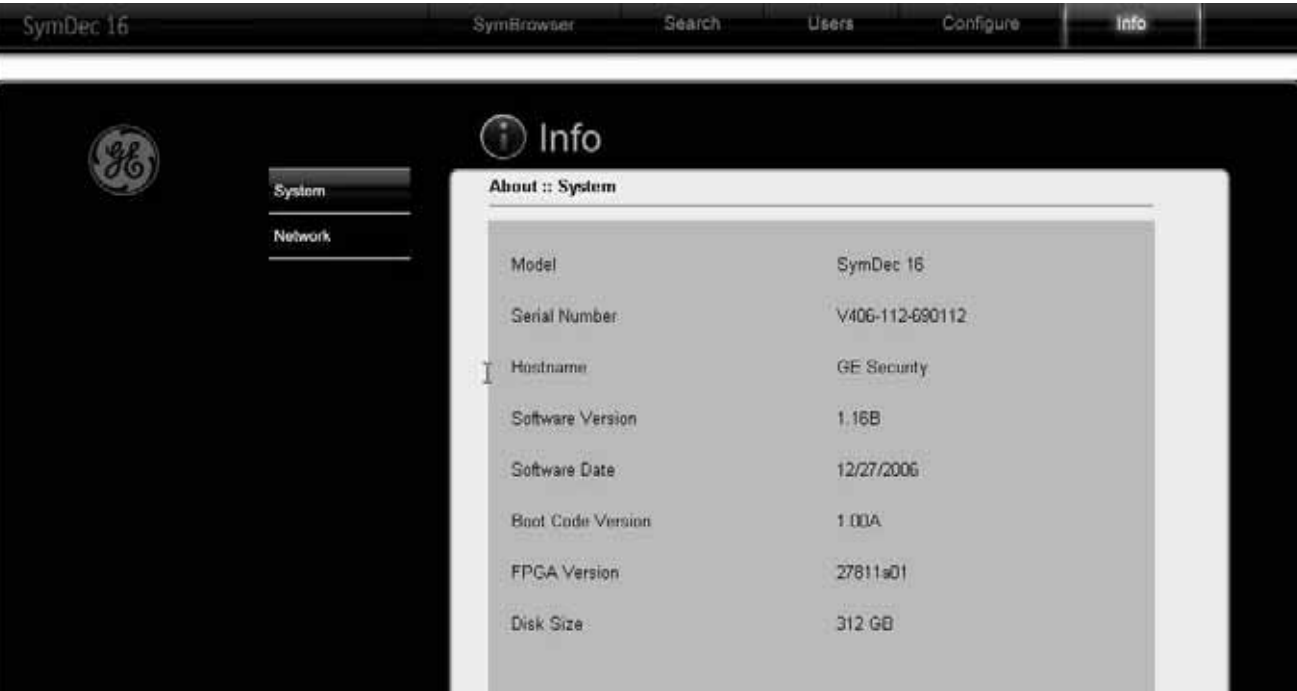
Info

Clicking on the *Info* link will display system and network information.

- System
- Network

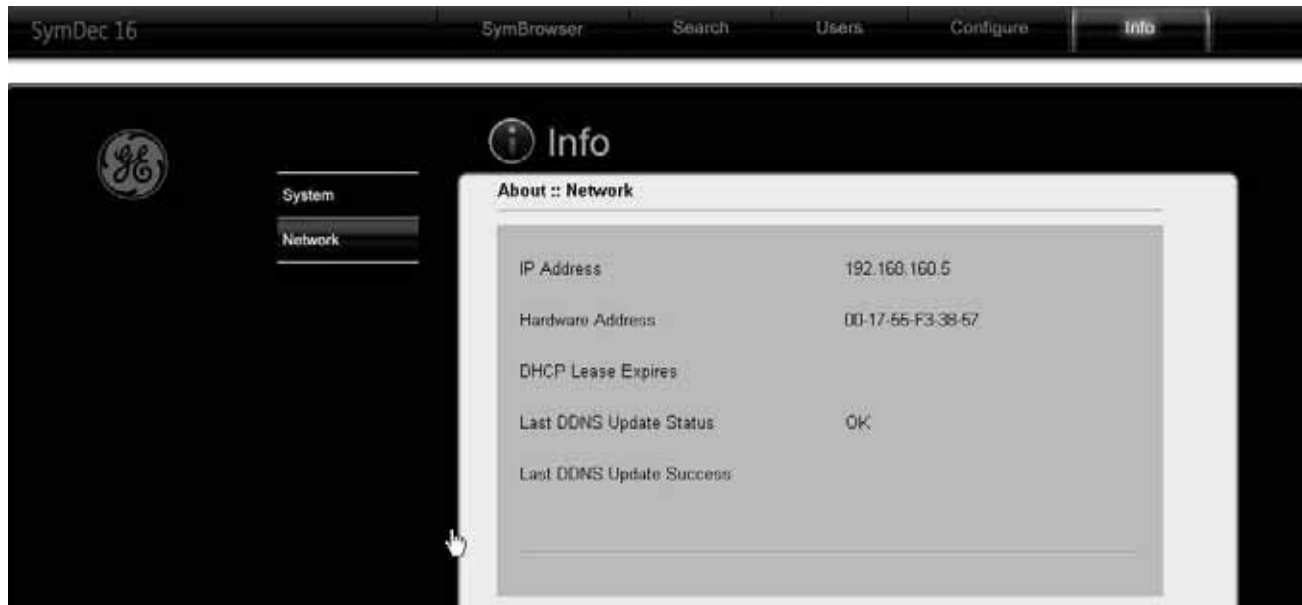
System

Figure 94. About system page



Network

Figure 95. About network page

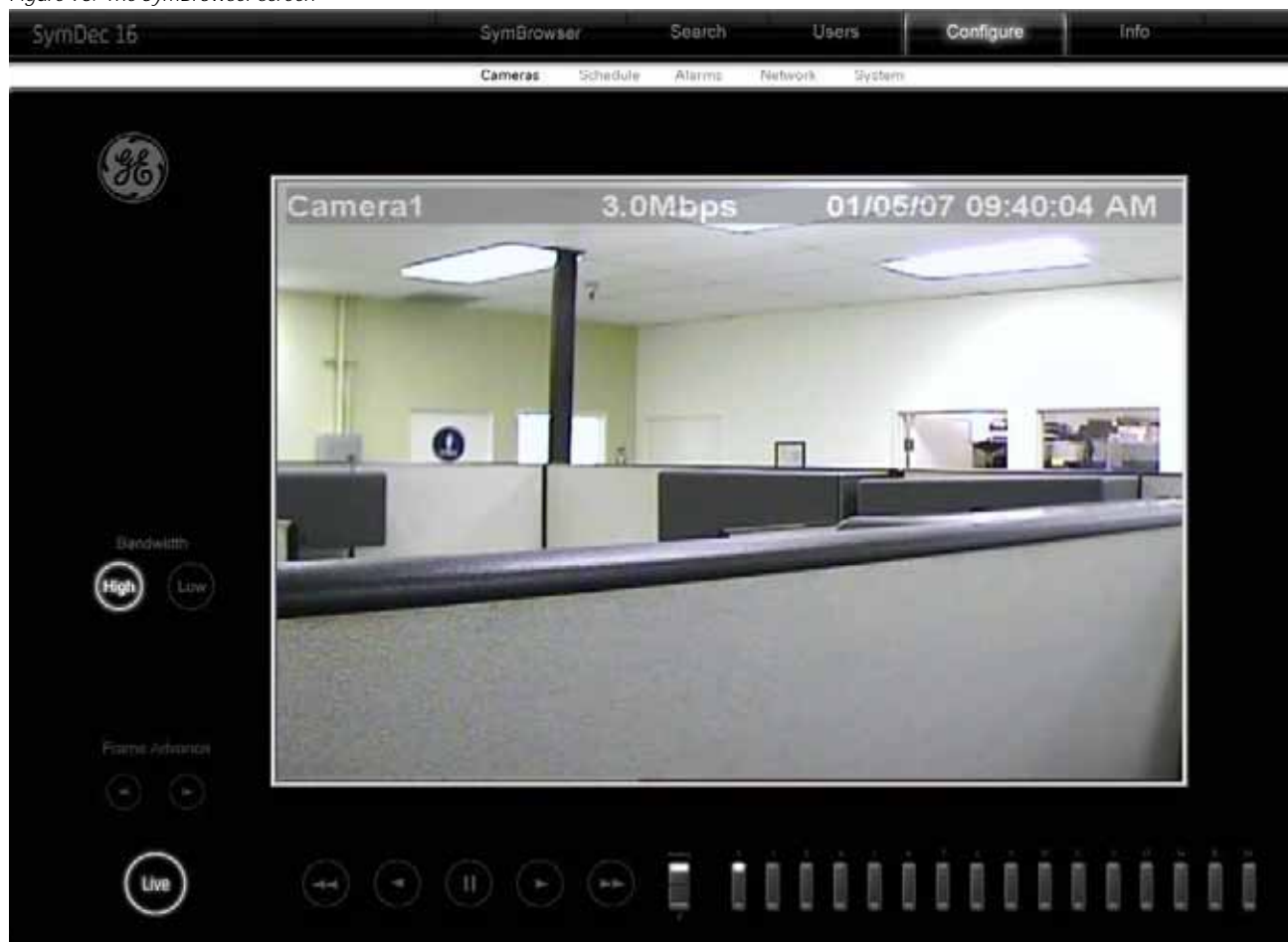


Symbrowser

The SymBrowser screen provides you access to live and recorded video without the need for additional software. Simply click on the *SymBrowser* link. The following features are available:

- Right-click on the video to switch from live or playback mode or view full-screen.
- High and Low bandwidth buttons (High is best with PTZ cameras)
- Live button
- Frame advance forward and reverse button
- Replay button
- Fast reverse playback button
- Reverse playback button
- pause button
- Play button
- Fast play forward button
- Analog/IP camera select button
- Camera buttons (1-16 analog, 1-4 IP)

Figure 96. The SymBrowser screen



Chapter 6 Searching and Archiving

This chapter provides an in-depth explanation of the SymDec 16's *Searching* and *Archiving features*

In this chapter:

<i>Searching</i>	124
<i>The Disk Analysis Screen</i>	124
<i>Search Filters</i>	125
<i>Date and Time Search</i>	125
<i>Camera Motion Search</i>	126
<i>Daily Hours Search</i>	126
<i>Search For Search</i>	127
<i>Search Results</i>	128
<i>Archiving</i>	129
<i>Archive Start screen</i>	130
<i>Fullscreen Search Results Preview</i>	131
<i>SymPlayer</i>	132

Searching

Press the *Search* button on the front panel to launch the *Search* menus. The first screen to display is the *Disk Analysis* Screen.

The Disk Analysis Screen

The Disk Analysis screen provides a graphical view of the video stored on the hard drive. The *Enter* button moves you into the Disk Analysis focus window. When first loaded Disk Analysis shows all the video currently stored on the hard drive. The scale is determined dynamically. The timeline flows from left (oldest) to right (newest) video.

In the Disk Analysis pane, UP and DOWN will zoom the view in and out. LEFT and RIGHT will move the cursor. The window is divided horizontally into 48 equal slices. Holding down LEFT and RIGHT will jump the cursor back and forth to the next nearest slice in that direction. Additional behaviors include:

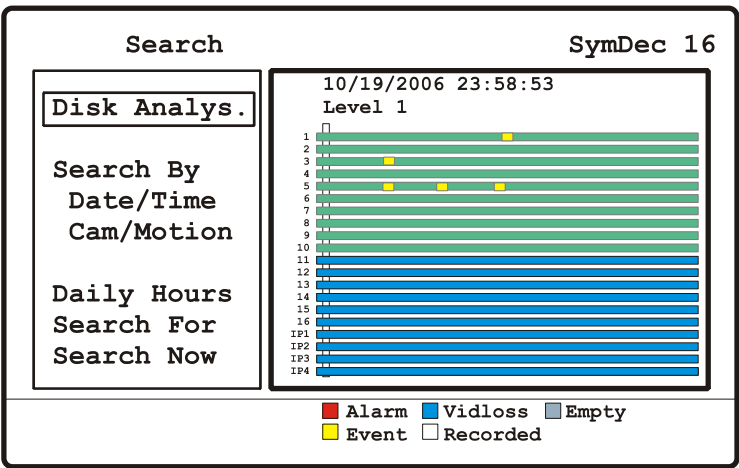
- LEFT from Far left scrolls left a half screen if more video is available, centering the cursor, else the cursor remains at the left end of the video.
- RIGHT from Far right scrolls right a half screen if more video is available, centering the cursor, else the cursor remains at the right end of the video.

Zoom is intended to allow video ranges from 1 year to 10 seconds within seven levels of zoom.

- Zoom In expands the two slices to the left and right of the cursor to the fullpane.
- Zoom Out reduces the current full screen to four slices centered in the middle.

Holding LEFT or RIGHT should act as repeated presses. ENTER will begin playback at current play marker.

Figure 97. The Disk Analysis Screen



Search Filters

Search by Dates..., *Cameras/Motion*, *Daily Hours* and *Search For...* are all filters which help to narrow the results the user is presented with when performing a search. The results are then derived at the intersection of all of the filters. If any one filter extends beyond the range of any other (such as daily hours being outside the *Search by Dates* range selected), the results should not be negatively effected as the intersection will still be within the smaller of the two spaces.

Date and Time Search

Select *Search by Date/Time* to launch the Date Time Search menu. Menu options include:

- All Dates
- Last x days (x = number)
- Last x hours
- Start/Stop

Figure 98. Search by Date and Time screen

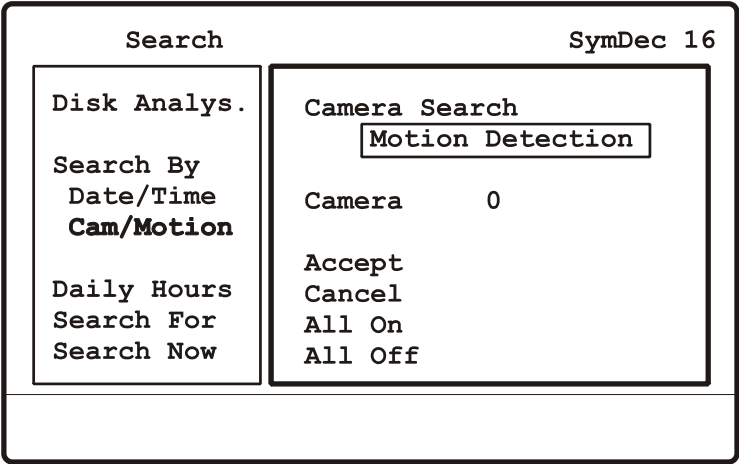
Search		SymDec 16
Disk Analys.	Date Search	
Search By	Start/Stop	
Date/Time	Start: 10/12/2006	
Cam/Motion	19:53:07	
Daily Hours	Stop: 10/12/2006	
Search For	19:54:07	
Search Now		

Camera Motion Search

Select *Search by Cam/Motion* to launch the Cam/Motion Search menu. Menu options include:

- All cameras
- Motion Detection
- Select by Camera

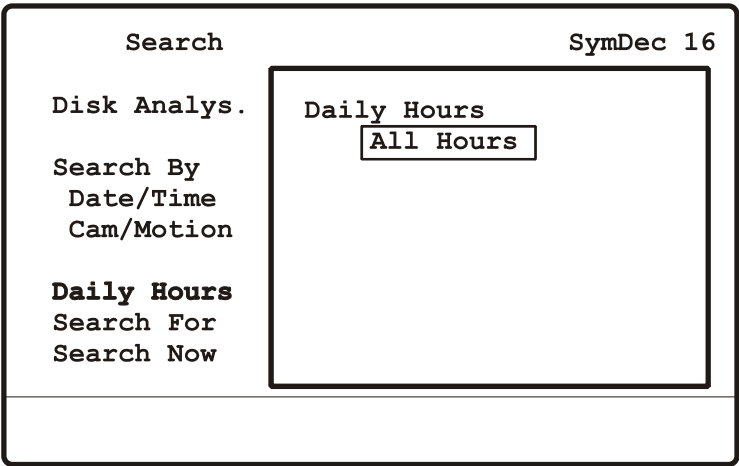
Figure 99. Search by Camera Motion screen



Daily Hours Search

Select *Search by Daily Hours* to launch the Daily Hours Search menu. This option searches *All Hours*.

Figure 100. Search by Daily Hours screen

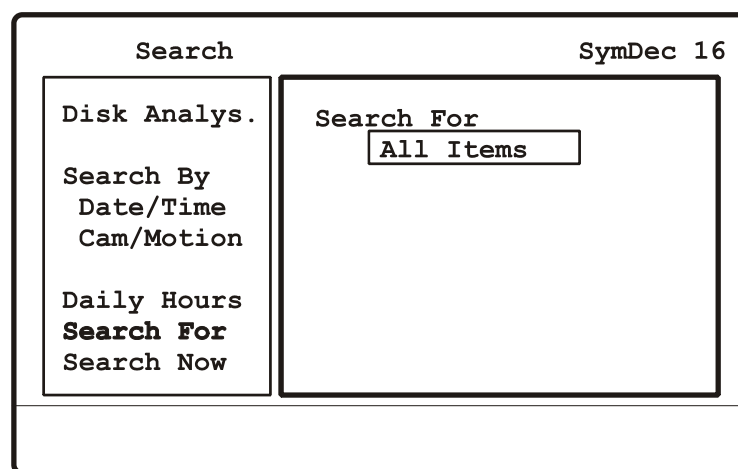


Search For Search

Select *Search by Search For* to launch the Search For Search menu. Menu options include:

- All Items
- Text: launches on-screen keypad
- Alarms + Events
- Alarms Only

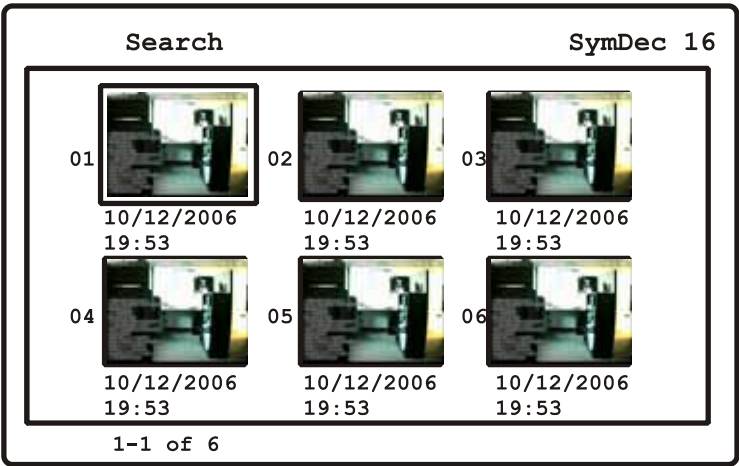
Figure 101. Search For screen



Search Results

Select the *Search Now* command and press the *Enter* button to launch the Search Results screen. Results are ordered by date, oldest first. Default selection is: Play of the top left thumbnail. Use the *arrow* buttons to move you through the selection of the thumbnails. Arrow indicators on the top and bottom are used to indicate that there are additional video segments on other screens. Press *enter* on any thumbnail to go to full screen preview.

Figure 102. Search Results screen



Archiving

Press the *Archive* button to launch the Archive screen. Menu options include:

- Archive Media - DVD or USB device
- Archive Name - Launches on-screen keypad
- Archive Length - In minutes
- Include Video Player - Yes or No
- Camera Selection boxes
- Size - In megabytes
- Start and Stop parameters
- Archive Now - Starts archiving to selected media

Figure 103. The Archive Screen

Archive

SymDec 16

Archive Media

Disc

0000 MB

Archive Name

Are

Archive Length

1

Minutes

Include Video Player

☒

Analog

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

Size :0000 MB

Start:10/12/2006

19:53:07

IP

1

2

3

4

Stop: 10/12/2006

19:54:07

Archive Now

No Media Found



CAUTION

Do not use DVD's with paper labels attached to the surface of the DVD. The label's surface may become damaged and cause the DVD media to become stuck inside the DVD recorder.

Only pre-formatted DVD+RW media can be used for archiving. In order to use the DVD drive for archiving video, the DVD media must be DVD+RW. The DVD+RW must be pre-formatted to UDF format using an application such as Nero InCD. Only then will the DVD+RW be recognized by the SymDec16 plus 4

Archive Start screen

Results are ordered by date, oldest first. Default selection is: Play of the top left thumbnail. Use the *arrow* buttons to move you through the selection of the thumbnails. Arrow indicators on the top and bottom are used to indicate that there are additional video segments on other screens. Press *enter* on any selected thumbnail to go to full screen preview.

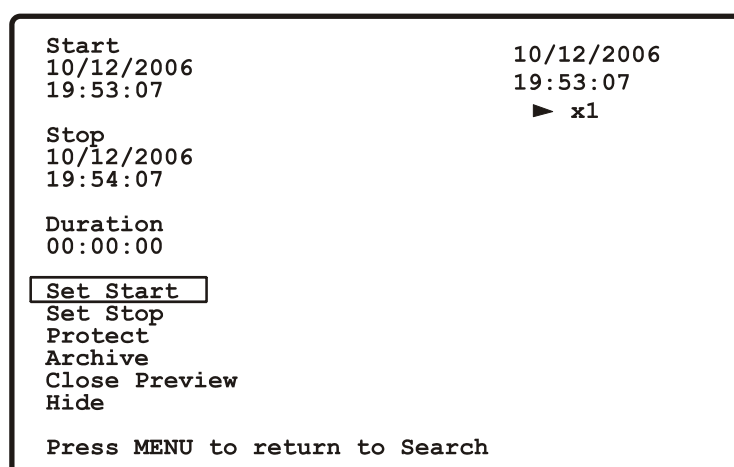
Figure 104. The Archive Start screen

Start 10/12/2006 19:53:07		10/12/2006 19:53:07	
Stop 10/12/2006 19:54:07			
Set Start			
Set Stop			
Protect			
Archive			
Return			

Fullscreen Search Results Preview

The *Search Results Preview* screen hides the menu system and puts the user in full screen mode with the selected thumbnail. From *Disk Analysis*, Preview hides the menu system and puts the user in a 16 multiscreen display with all channels in playback. All transport controls affect the video.

Figure 105.Fullscreen search results preview screen



The following menu options are available on this screen:

- *Set Start* - marks the beginning of the video for archive purposes. The resulting start is shown in the summary
- *Set Stop* - marks the end of the video for archive purposes. The resulting stop is shown in the summary. If no stop is associated with the current video, the current date and time are used.
- *Protect* - prevents the selected video from deletion.
- *Archive* - brings up the Search Archive screen.
- *Close Preview* - exits preview and search and returns the user to the display screen from which they entered search.
- *Hide* - collapses the Start, Stop, Duration and Menu into a single Unhide button to make video review easier. Pressing Menu in Hide mode behaves the same when fully displayed.
- *Menu* - returns the user to the screen that brought him to preview, either Thumbnail or Disk Analysis. The user is returned to the same point (Zoom level and position in Disk Analysis or level in the Search results list from a Search) from which they entered Preview.

SymPlayer

Symplayer launches automatically when an archived DVD containing SymPlayer is inserted into a PC DVD player. The following features are available:

- Frame advance forward and reverse button
- Replay button
- Fast reverse playback button
- Reverse playback button
- pause button
- Play button
- Fast play forward button
- Volume slider

Figure 106.The Symplayer



Chapter 7 Technical Specifications

This chapter provides the Technical Specifications of the SymDec 16 plus 4.

In this chapter:

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<i>General</i>	134
<i>Connections</i>	134
<i>Video</i>	134
<i>Audio</i>	135
<i>On-screen Video Indicators</i>	135
<i>Part Numbers</i>	135
<i>Factory Defaults</i>	136
<i>Menu defaults</i>	136
<i>IP addresses</i>	136
<i>Streaming defaults</i>	137

Technical Specifications

General

Power Supply	100-240 Volt AC, Auto-Ranging adapter
AC Amps	5A
Operating Temperature Range	Operating: 0 to 40 °C. Storage: -20 to +60 °C.
Relative Humidity Range (Non-Condensing)	Operating: 10% to 80%. Storage: 10% to 95%
Dimensions	Inches: 3.5 x 17.42 x 19.92, mm: 89 x 443 x 509
Weight	35.3 lbs. (16 kg)

Connections

Accessory I/O Port	DB-9 Male. Accessories Port
RS-232 Serial Port	RJ-45 Connector, 57600 Baud, 8,N,1, No flow control
Composite Video In	BNC Connector
Composite Video Out	BNC Connector
Audio In	RCA Connector
Audio Out	RCA Connector
10/100 Ethernet Port	RJ-45 Connector

Video

Video Signal Input	0.7 to 1.4 Volts peak-to-peak, with Automatic Gain Control
Video Signal Output	1 Volt peak-to-peak into 75-ohm
Input Termination	75-ohm
Colors	Y:U:V 4:2:2, 16.8 Million Colors
Gray Scale	256 Levels
Horizontal Resolution	720 Pixels
Vertical Resolution	484 Lines
Video Compression Standard	MPEG4
Audio Compression Standard	MPEG1 Layer 2

Audio

Audio Input:	315mV, 40k Ohms. Unbalanced.
Audio Output:	315mV, 600 Ohms. Unbalanced.

On-screen Video Indicators

Fast Forward Last Alarm Record Speed Playback Speed	Pause Play Record Capacity Reverse Play	Rewind Time and Date Video Loss
--	--	---------------------------------------

Part Numbers

User Manual	0150-0325
Rack Mount Kit	SYMDEC16+4-RK

All specifications are subject to change without notice. GE Security believes all specifications are correct, but no liability is assumed for omissions or errors.

Factory Defaults

Menu defaults

Function	Setting
Time Format	24 Hour
Date Format	MM / DD / YY
Normal Record Speed	30 frames per seconds (NTSC), 25 frames per second (PAL)
Alarm Record Speed	30 frames per seconds (NTSC), 25 pictures per second (PAL)
Record Quality	High
Disk Overwrite Mode	Continuous Overwrite
Auto Delete Mode	Off
Front Panel Locked	Off
Brightness	50%
Contrast	50%
Saturation	50%
Display Current Time and Date	Off
Display Record Capacity	Off
Display Last Alarm	Off
Display Record or Playback Speed	Off
Display Playback Time and Date	Off
Baud Rate	57600
Alarm Buzzer	Disabled

IP addresses

Address Type	Address
IP Address	192.168.1.82
Subnet Mask	255.255.0.0
Gateway address	192.168.1.1

Streaming defaults

Function	Setting
Streaming Mode (Normal Setup)	Disabled
Streaming Protocol (Normal Setup)	UDP
Streaming Port (Normal Setup)	8090
Streaming address (Normal Setup)	N/A
Receiver Cam Map ID Address for camera 4 (Normal Setup)	N/A
Sender Control Enable (Advanced Setup)	Selected
Sender Control Port (Advanced Setup)	8092
Receiver Control Enable (Advanced Setup)	Selected
Receiver Control Port (Advanced Setup)	8092

Chapter 8 Maintenance, support

This chapter provides information to help you contact technical support in case you need assistance with your GE equipment.

In this chapter:

<i>Contacting technical support</i>	140
<i>Online publication library</i>	140

Contacting technical support

For assistance installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, please contact your local supplier.

Note: Be ready at the equipment before calling for technical support.